DOI: 10.1111/j.1468-2249.2011.00329.x

MICHAEL SPITZER

Mapping the Human Heart: a Holistic Analysis of Fear in Schubert

Emotion affects cognition; in some ways, it is a form of cognition. When we are happy or sad, we perceive the world differently, and even think and behave differently. In Jenefer Robinson's words, 'emotions regestalt the world in line with our wants, goals, and interests' (2005, p. 128). How might 'regestalting' work in music analysis? The present essay focusses on a single composer, Schubert, and on a specific emotion, fear. In some highly suggestive lines written in 1927 on the cognitive role of fear, Heidegger compares the bewilderment of fearful people, dashing about thoughtlessly, to the inhabitants of a burning house who 'save the most indifferent things that are most closely ready-to-hand' (2000, p. 392). Some of Schubert's music, I shall argue, dashes about thoughtlessly like a frightened person. Whereas it's hardly news that people find Schubert's music to be expressive of emotion, it would be novel to relate emotional qualia to varieties of emotional 'behaviour' enshrined within musical structure. The novelty, in short, would be to analyse emotion and structure as two sides of the same coin. I shall claim that there are distinct differences in musical processes – akin to distinctions in emotional behaviour in people – which cut across standard divisions of historical style, genre and idiom, and that these differences map onto basic emotional categories. From this standpoint, I shall analyse fear in two pieces by Schubert: the first movement of his *Unfinished* Symphony and his Lied *Der Erlkönig*. Before I address these works, I need to attend to some preliminary housekeeping. The literature on emotion theory is already vast, and I take a particular path through it.

Categories, Dimensions, Agencies, Models

Given music theory's interest in tonal space, an immediate touchpoint with emotion theory might be James Russell's highly influential map of affect space, his circumplex model. Russell arranged eight affect concepts in two-dimensional bipolar space (Fig. 1). As on a compass, the horizontal (east–west) axis in Russell's geographical metaphor is the pleasure–displeasure dimension, and the vertical (north–south) axis is arousal–sleep. At a time when emotions were thought to be isolated and monopolar, Russell argued that a bipolar circular arrangement was a better reflection of how lay people categorised emotions (Fig. 2): as combinations of pleasure and arousal, as polarised antonyms and with overlapping, 'fuzzy' boundaries. It is common, therefore, for people to conceptualise Happy as opposite to Miserable, close to Delighted (because the two emotions overlap in

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd, 9600 Garsington Road, Oxford OX4 2DQ, UK
and 350 Main Street, Malden, MA 02148, USA

Fig. 1 Russell's eight affect concepts in circular order

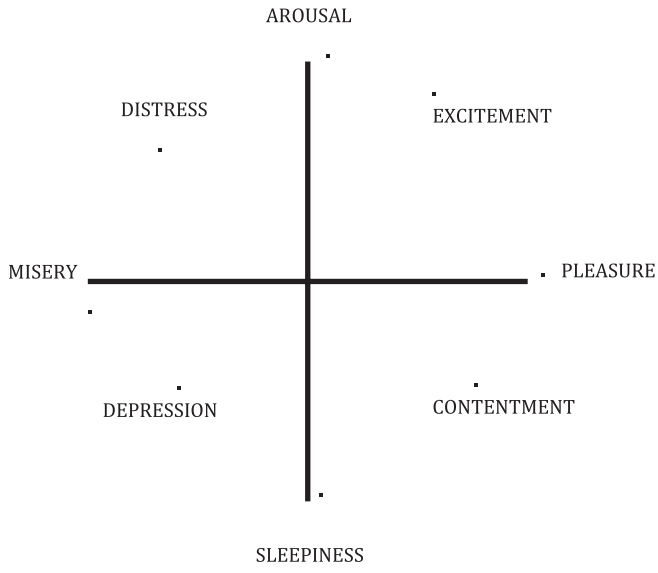
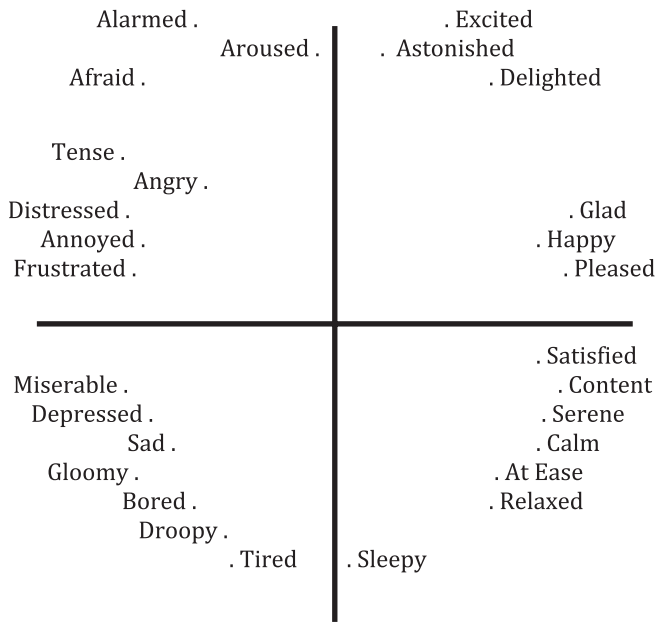


Fig. 2 Russell's direct circular scaling of coordinates for 28 affect words



© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

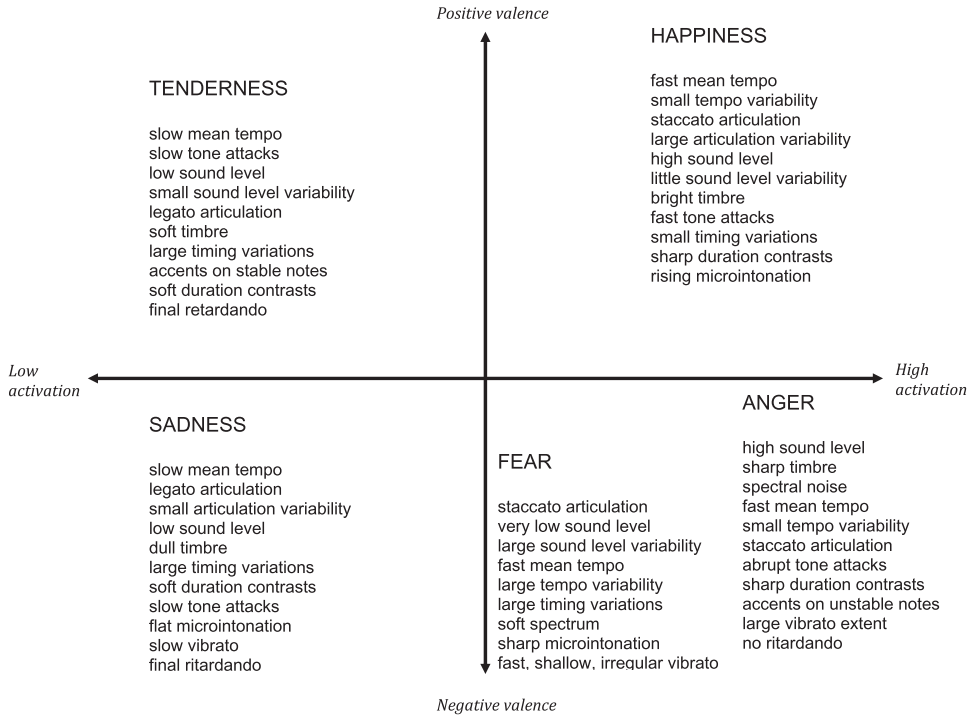
meaning), and orthogonal to Sleepy (because conceptually distinct). The space between these terms unfolds gradual but statistically specifiable transitions, encompassing manifold nuanced emotions (Satisfied, Serene, Relaxed, etc.). In more recent cognitivist parlance, emotions are prototypes subject to radial categorization in terms of distance from a prototypical centre.[1]

The circumplex model suggests many touchpoints with music's own circular spaces (e.g. fifth cycles, neo-Riemannian lattices), oppositional valences (e.g. major/minor, dominant/subdominant) and dimensions of activation or arousal (e.g. tension/resolution). Nevertheless, affect space, with its compelling unity 'whereby every variable is related to every other variable within the domain' (see Russell 1980, pp. 1171–2), differs from tonal space in one critical respect. The slots within a neo-Riemannian lattice, for instance, are highly discrete: there are no transitions between, say, I and III, or I and V, just as there are no gradations between the letters A and B of an alphabet or numbers 1 and 2 of a digital clock.[2] From this standpoint, the fuzziness of affect space is akin to an analogue rather than a digital clock face. Before we address the musical applications of the circumplex model, however, we should note some of its internal tensions. Take Anger (Angry) and Fear (Afraid). These are close neighbours in affect space, yet trembling and fleeing are nothing like shouting and fighting. Perhaps the individuality of emotions – especially once we start thinking of them as complex systems rather than as semantic labels – cannot really be accommodated within a single space. Such tensions are due to the hybridity of Russell's model, which attempts to harmonise categorical and dimensional theories that stem from divergent traditions. The categorical model is the older; current theory takes its bearings from Darwin's *The Expression of the Emotions in Man and Animals* (1872) but ultimately follows in the ancient tradition relating music to the passions.[3] Dimensionality, first advanced by the German psychologist Wilhelm Wundt in 1892, was the dominant theory for most of the twentieth century. It is arguably akin to the formalism which dominated music theory from Eduard Hanslick through Schoenberg, Heinrich Schenker and Leonard Meyer, charting as it does arabesques of tension and resolution. Music analysis, insofar as it concerns itself with narratives of tension and resolution, implication and realisation, has cleaved to the dimensional model of emotion in terms of inflections of an undifferentiated 'core affect' or 'feeling tone' (Meyer 1956, pp. 16–17). Analysis mirrors the course of much music aesthetics when it holds that musical expression is an ineffable, protean plasma that can be determined, or shaped, only by the addition of contexts or words. In the writings of both Hanslick and Meyer, this leads to a sharp divide between core affect and emotion *per se*: emotions are judged to be extrinsic to musical experience.[4]

And yet Russell's model, its problems notwithstanding, suggests that analysis is missing literally half the picture. The complex historical reasons for *Formenlehre*'s dimensional turn in the early nineteenth century (many of which can be laid at Kant's door) need not concern us here.[5] Suffice it to say that musical thought benefitted from the plurality of a categorical view throughout the

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 3 Juslin's musical circumplex, with acoustic cues



seventeenth and eighteenth centuries, from the ages of *Affektenlehre* to the high Classical style; in the same way, I urge that a return to the pluralism of categorical emotions can only benefit current music analysis. Patrik Juslin's musical adaptation of Russell's model takes a seminal step in this direction (Fig. 3).[6] Synthesising the experimental findings of co-workers such as Alf Gabrielsson and Erik Lindström, Juslin indicates which acoustic cues performers use in order to communicate five basic emotional categories: Fear, Anger, Happiness, Tenderness, and Sadness.[7] (Juslin flips Russell's axes, but the principles are the same – the interface of categorical and dimensional models.) The appeal of these acoustic cues is that they comprise the sort of textural and dynamic parameters generally written off as secondary dimensions (similar to what Meyer called 'statistical parameters' [2001, p. 342]). Yet here they are discovered to be more fundamental than harmony or melody in their capacity to define musical emotion: by changing the articulation, dynamics, tempo and microtiming, the composer can make the same melody express different emotions. This would seem to consign musical emotion to the realm of performance practice – and performance theory – except for the fact that subsequent researchers, such as Joel Resnicow, Peter Salovey and Bruno Repp (2004), confirmed that the intrinsic character of musical materials constrains how they can be performed. For

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

instance, it is difficult to make a minor-mode Bach prelude sound happy even when performing it faster and more staccato. Conversely, performance theory has yet to contextualise its data within a normative categorical framework relating musical expressivity with emotion in the real world.

It is hardly a surprise to analysts that musical qualities bear inherent expressive qualities irrespective of performers. The point, however, is not to choose between one or the other of these options – to choose either the performative or the material – but to analyse how they interact. Here as elsewhere Meyer led the way in suggesting that statistical parameters, capturing the ethos or character of a work, can afford a quick-and-dirty snapshot of emotions which are then unfolded at greater length and leisure by the stream of musical implications.[8] In brief, Juslin's cues, rendered by an expressive performer, capture the emotional category of a work; this same emotional category is then unfolded by the work's formal (melodic, harmonic, contrapuntal) process. In Robinson's neo-Darwinian terms, a fast 'affective appraisal' (2005, p. 3) is succeeded by a more reflective 'cognitive appraisal and reappraisal' (*ibid*., p. 93). Emotion affects cognition.[9]

Three further steps need to be taken if the Juslin-Russell model is to be accommodated into the analysis of a complex musical work. First, the work's formal process itself, ostensibly on the cognitive side but in reality unfolding affect at a higher level, needs to be defined in emotional terms. These terms, I claim, are behavioural, with music mimicking both vocal utterance and dynamic action. Second, we must reckon with the sharp line Juslin draws between the expression and the induction (or arousal) of musical emotion. His model records performers' capacity to communicate the expressive cues of emotion, and listeners' ability to recognise these cues; it emphatically does not refer to how the music might make the listeners feel. I shall argue that, in practice, the distinction between expression and induction dissolves. Third, the affordances of the emotional categories themselves, in all their richness and variety, need to be unpacked, so that we consider them as systems rather than monoliths. Fear isn't a single thing but a rising scale of responses and actions, encompassing mild anxiety, alarm, dread, terror, trembling and fight-or-flight.[10] The fearsome object is distinct from the fearful subject, and we can also fear *for* the safety of a third party. And the experience of Fear coordinates simultaneous mechanisms along the spectrum of biology to culture, including the startle reflex potentiated deep within the brain by receptors in the amygdala, musical expectations encoded within music's artificial syntax and frightening connotations motivated through cultural and historical associations.

All three points throw up a great number of issues which cut across each other, and which I shall bundle together by venturing a distinction based on a truism: that music comprises both expression and action. And yet, music psychologists, when they write about emotion, largely confine themselves to the former, identified with music's quasi-vocal character on account of shared sonic qualities. Juslin's view, which he traces back to Herbert Spencer's functionalist

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

(evolutionary) perspective, is that emotional expression in music draws from innate programmes for the vocal expression of basic emotions: 'The origin of the "expressive code" is to be sought in involuntary and emotion-specific physiological changes associated with emotional reactions, which strongly influence different aspects of voice production' (Juslin and Timmers 2010, p. 470). The path not taken, however, is one actually opened up by John Sloboda and Patrik Juslin's chapter in their 2001 collection (and seemingly closed off in their 2010 *Handbook*): the applicability of Nico Frijda's theory of 'action tendency' to music (Frijda 1986, p. 69). Action tendency describes how an emotion 'directs the person experiencing it towards one category of behaviours rather than another' (Juslin and Sloboda 2001, p. 87). Thus fearful persons may respond to fear in a series of actions: closing their eyes, hiding, running away (flight) or confronting and attacking the fearsome object (fight). The probabilistic quality of Frijda's theory – its association of emotion with a set of behaviours rather than with a single rigidly prescribed reflex – is one of its most attractive features. It aligns with the statistical distribution of Juslin's acoustic cues, where it is not the presence or absence of one sonic parameter in particular which defines musical Fear (say, staccato articulation or a low sound level), but the overall clustering of cues as a fuzzy package, with a high tolerance of redundancy. The path not taken would link this behavioural perspective with the goal orientation of musical processes, hearing the tendencies of musical action by analogy with those of human action in everyday life.[11] The metaphor of musical work as human is at the basis of the persona theory of music central to recent aesthetics in the writings of Robinson (2005), Charles Nussbaum (2007), and others (including Cochrane, this issue). In this essay, I take the persona theory seriously, extending the idea of the persona to comprehend not just agency, but also ways of gesturing, acting, feeling, perceiving and thinking.

In practice, what I term the 'expression model' and the 'action model' interpenetrate in richly productive ways. But it is worthwhile laying them out as heuristics.

The Expression Model

Two of Schubert's most famous string quartets open with robust expressions of Anger, displaying many of Juslin's acoustic cues for that emotion: high sound level (*fortissimo*), fast tempo (*allegro*), staccato articulation, abruptness and sharp duration contrasts (Ex. 1). It is hard not to hear both of these passages, following Juslin's theory, as quasi-vocal utterances. In this light, the quiet consequents to both of these gambits (a single bar in the G major, an extended ten-bar phrase in the D minor) sound like fearful responses to Anger. Of course, a question-and-answer dialogue is foundational to Classical and early Romantic phraseology. The beauty of Schubert's phrase patterns here, however, is that they nicely encapsulate an emotional dialogue too – and, furthermore, in a way which epitomises the interaction between expression and arousal. It is the *expression* of

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 1a Schubert, String Quartet in G major, Op. 161, i, bars 1–23



Anger which *arouses* Fear (NB: Fear in the music, not in the listener). This complementarity removes the potential stumbling block in Juslin's communication theory – that the performers hardly ever arouse the same emotions they express. The point holds for fictional situations in general (literary and cinematic), where emotions, according to Nussbaum, 'may be aroused, but only

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 1b Schubert, String Quartet in D minor, *Death and the Maiden*, i, bars 1–14

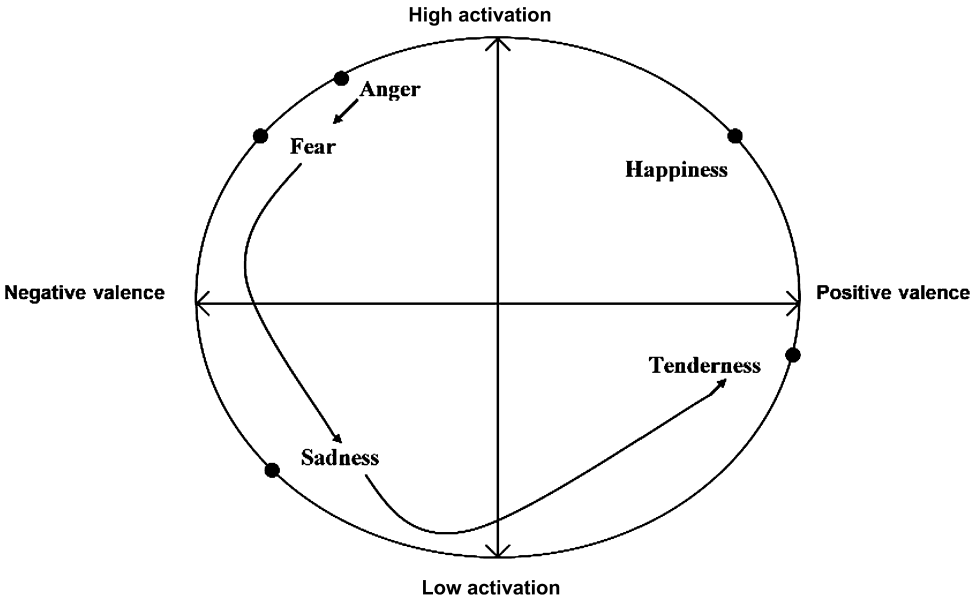


"off-line," that is, with action tendency *inhibited*' (Nussbaum 2007, p. 200; emphasis in original). Does the listener, then, experience true Fear here, as if a frightening event were truly occurring? I contend that the listener's situation is similar to that of a cinema audience, where arousal of emotion is contingent on a process of identification with screen personas mediated through acts of empathy and sympathy. The listener or viewer needs to actively empathise with feelings enacted within the (musical or cinematic) fiction in order to experience a sympathetic reaction. Empathy entails sameness, as when one 'catches' a feeling through emotional contagion; sympathy involves difference, such as the set of contrasting attitudes we may enact towards displayed feelings, including compassion, fear, outrage and contempt. Like a cinematic auteur, Schubert directs our affective trajectory by inscribing a particular sympathetic emotional reaction (Fear) into the two consequent phrases. The music feels for us, ventriloquising our own Fear of Anger.

It is hard, nonetheless, to discount a certain emotional leakage from this transaction, owing to aesthetic as well as brutally sonic parameters. Hence the musical representation of Anger may be joyfully exhilarating, since animated sounds can create pleasure by dint of both visceral arousal and the cathartic discharge of narrative tensions. Does Anger, then, arouse Happiness rather than

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

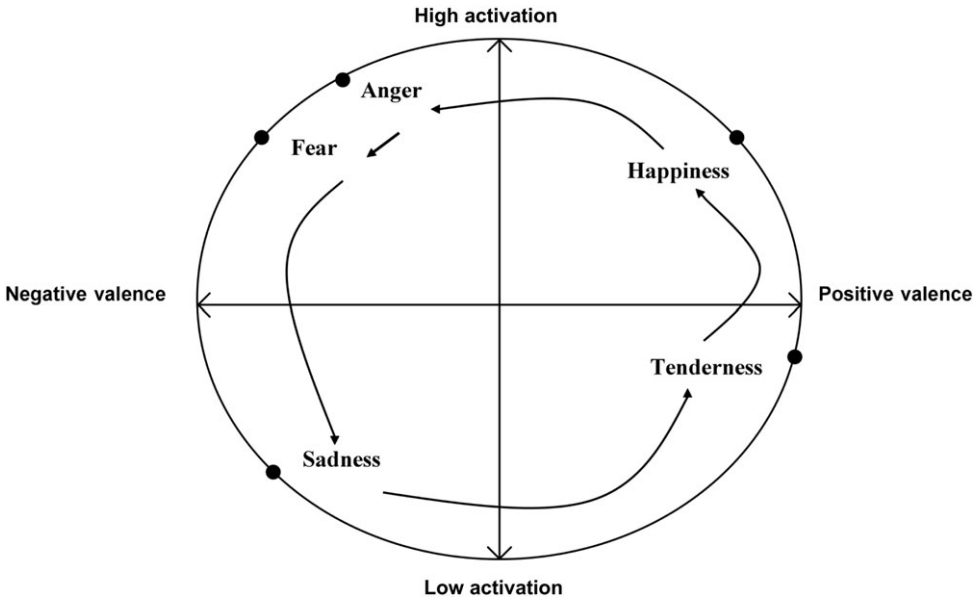
Fig. 4 Anticlockwise pathway in Schubert, String Quartet in D minor



Fear, or does it elicit both emotions? This is not a question of either/or, but a pointer to the rich complexity of emotions, especially when they cross over from 'on-line' reality to 'off-line' fiction. I shall pick up that thread later, when I consider the 'delightful horror' (Kant [1790] 1989, p. 131) of the sublime – arguably a representation of Anger which induces a mix of Fear and Happiness. For the present, it suffices to reject the possibility that the relationship between expression and arousal is utterly unpredictable and free, subject to hermeneutic openness. It might be claimed, for instance, that listeners can respond in any way they like to the emotions they identify as expressed in the music, and that this openness is to be treasured as a guarantee of the aesthetic freedom quintessential to artworks. And yet, on closer inspection, both Schubert Quartets reveal a surprising level of normativity in their affective trajectories. Both openings, considered as relays of interlocking emotional responses, rotate anticlockwise round Juslin's model of affect space (flipped back to Russell's original orientation). The scheme in the D minor Quartet is smoother, the initial Angry utterance (bars 1–4) leading to Fear (bars 4–6), Sadness (bars 7–8) and Tenderness (bars 9–11), with a drift back into Sadness at the end of the phrase (Fig. 4). By comparison, the G major Quartet is compressed and explosive (Fig. 5). An opening bar of Tenderness is raised, through the progressive activation of the hairpin *crescendo*, to Happiness in bar 2 before exploding into Anger in bars 3–4, which is then answered by Fear in bar 5. The path is then repeated (bars 6–10),

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 5 Anticlockwise pathway in Schubert, String Quartet in G major

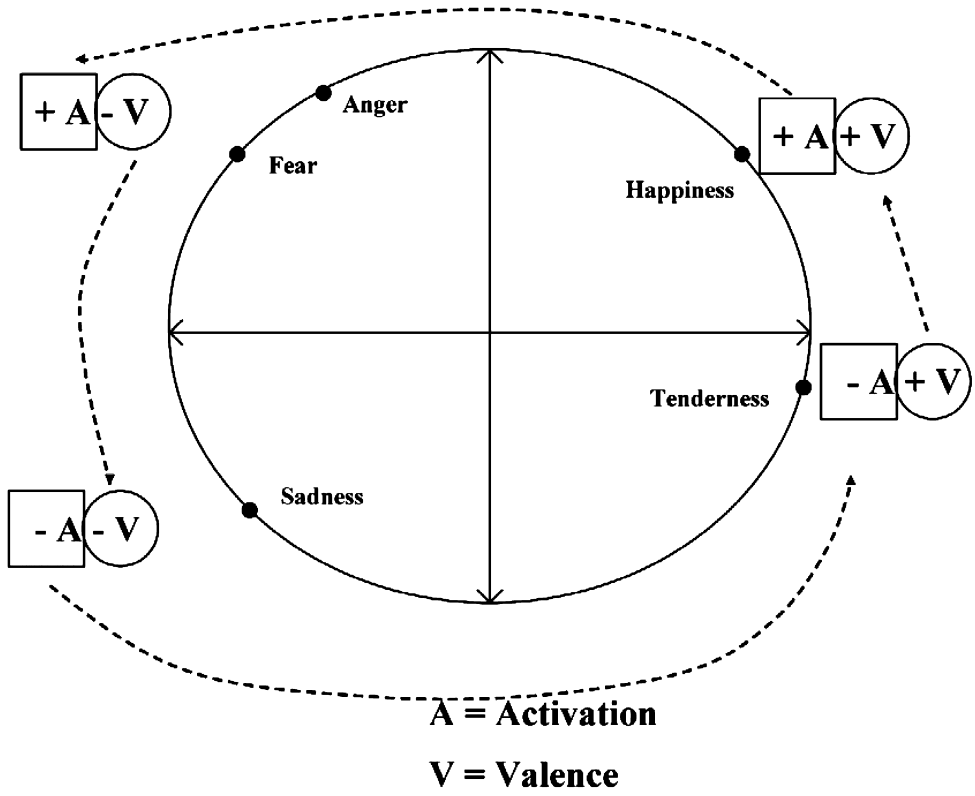


after which it is allowed to continue round the clock face to four full bars of Sadness (bars 11–14) and culminate in an expansive phrase of Tenderness (bars 15–23).

The regularity of these two affective trajectories is far from circumstantial; we will see them repeated, both clockwise and anticlockwise, in *Erlkönig*. The question remains: why? Characteristic of Schubert's harmonic language is the use of progressions pivoting on common tones, a procedure foreshadowing the parsimonious side-slips studied by neo-Riemannian theory. I would argue that a similar adjacency rule, analogous to the law of the shortest distance, pertains to Schubert's slide between contiguous emotions in affect space. The affective trajectory in the two Quartets is lubricated by alternating commonalities of activation (A) and valence (V). As we saw earlier in Russell's model, Anger and Fear are wild cards, since they share the same quadrant (the other three quadrants each contain a single emotion apiece); this bespeaks the unusual intimacy between these two affects. Even so, the path from Anger to Fear descends the slope of activation whilst sharing negative valence. The path from Fear to Sadness reduces activation further; the step from Sadness to Tenderness pivots on common low activation whilst reversing valence. Conversely, the move from Tenderness to Happiness maintains positive valence whilst raising activation. Finally, the turn from Happiness to Anger pivots on common high activation across a switch from positive to negative valence. The system of alternating pivots can be schematised as a circle of transformations (Fig. 6). The circumplex model was never designed as a record of, or blueprint for, social action, and the leap

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 6 Adjacency rule in affect space



from affect space into the world of interpersonal relations takes us far beyond the scope of this article. Affect space might imply that emotional dialogues are smooth (via orthogonal quadrants at 90 degrees), whereas real-life as well as fictional transactions are often disjunct (antinomic at 180 degrees), as when the Furies' Anger is soothed by Orpheus's Tenderness. Smoothness is actually borne out better within the internal domain of individual self-regulation. Izard and Ackerman argue that 'emotion patterns may self-organize' in order to regulate negative affect: '[i]n the depression pattern, the energy-mobilizing effects of Anger counteract the sadness-induced slowing effect on mental and motor processes' (Izard and Ackerman 2004, p. 259). Without such cross-emotion regulation, extreme depression or hostility 'can lead to personal disaster' (*ibid.*). Conversely, disjunction tends to characterise intersubjective dramas, where emotional change is often driven by differentials of function, status or power. Take the stereotypical situation of a mother with a crying infant. It is often said that a parent 'mirrors' a child's affect through what Daniel Stern calls 'affect attunement' (Stern 2000, p. 140). Stern's wider point, however, is that sharing a child's distress is only the prerequisite, and first step, toward, changing that emotion:

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

> A very common example of a mother's influencing or even determining what a child will feel occurs when the child falls down and starts to cry. If the mother quickly moves into a fun-surprise mode, 'Oh, what an interesting and funny thing just happened to you', the infant is likely to switch gears into a gleeful state. One might conclude that the mother brought the infant from one feeling state to an entirely different one. However, the mother's manoeuvre would never have worked if the level of arousal she showed in her fun-filled surprise had not matched the infant's initial level of negatively toned arousal. Some degree of attunement may have been necessary to permit a successful social referencing. (*Ibid.*, pp. 221–2)

It is worth dwelling on this stereotype because parent-child mirroring is generally taken as an idealised paradigm for the interactional synchrony displayed by musicians, both when they individually entrain to a beat and when they improvise with each other.[12]

Of course, maps in musical space, as much as in real space, do not prescribe trajectories; they simply indicate distances between points. The same is true of affect space. In one respect, however, Schubert's predilection for sideways moves in affect space could be seen as mirroring the propensity towards parsimonious harmonic smoothness found in much Romantic music, including his own. Perhaps the logic of affect space may direct the music against the grain of natural affective trajectories. A composer aiming at emotional realism may need to fight the musical material's tendency to move in a particular direction, assuaging Anger with Tenderness, say (a 180-degree relationship), rather than reacting reflexively with Fear in the same quadrant. Affect space, then, helps to profile compositional freedom. We will see that these issues are particularly germane in *Erlkönig*, which expressly confronts a child's interpersonal affective dynamics with his musical mother and father.

The Action Model

The expression and action models represent complementary dimensions of mental space. The affect space of the circumplex model is an arrangement of emotions. The space denoted by the action model is that of an individual interacting with his or her environment. An example of this ecological aspect of Fear is afforded by Schubert's late Piano Sonata in B♭, D. 956. The opening idyll is interrupted at bar 8 by a mysterious trill, which heralds danger. The lyrical material resumes, and the ominous figure returns twice more in the tonic group, steering the music into a G♭ major parenthesis in bars 19–35, and – after a further *da capo* of the B♭ melody – into a *fortissimo* climax in F♯ minor at bar 48 (no trill here, but the semiquaver run suffices). The music unfolds a pattern of distant threat rumbling intermittently whilst getting closer, and finally exploding. Across the landscape of sonata form, Schubert situates the listener as a fixed observer of an advancing threat. There are ecological reasons why we tend to perceive very deep sounds as betokening large size; the trill which animates the low G♭ endows this large object with energy. The *pianississimo* dynamic marking projects this

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

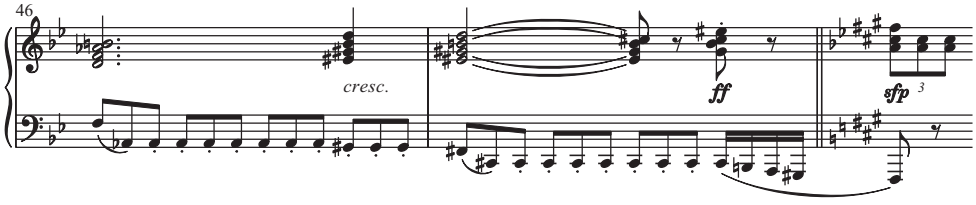
Ex. 2 Schubert, Piano Sonata in B♭, Op. posth., bars 1–11



Ex. 3a Schubert, Piano Sonata in B♭, bars 19–21



Ex. 3b Schubert, Piano Sonata in B♭, bars 46–48



large moving object into the far distance. The resulting sound image is that of a sizeable, fast-moving, distant and probably dangerous object advancing towards the listener. Within this soundscape, the phenomenal blend between temporal succession and motion across a landscape is conveyed through registral ascent: at the moment of crisis, the arrival of the threat is palpably expressed by the rising arpeggiation at bars 45–47, when the original G♭ is transferred to a top F♯.

This scenario assumes an overlap between musical hearing and ecological perception of objects and actions in the real world: these two 'ways of listening'

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

(Clarke 2005, p. 1) are tightly interlinked, if not quite to the extent that Eric Clarke seems to imply.[13] Besides conveying an impression of an object (the trill) and an action (its advance), the music also induces a certain way of listening by which the trill is perceived to be threatening. The nature of this threat can be analysed in terms of the appraisal theories of emotion set forth by Scherer and Ellsworth. Appraisal theories consider how 'emotions are elicited and differentiated by the subjective interpretation of the personal significance of events' (Scherer and Ellsworth 2009, p. 45). Unlike theorists of basic emotions such as Juslin, appraisal theorists break up emotional categories into smaller components. By this light, Schubert's trill matches Scherer and Ellsworth's 'stimulus evaluation checks' (*ibid*., pp. 46–7) for Suddenness (it is unprepared), Unfamiliarity (it is formless), Urgency (it is fast – as trills are – as well as melodically and harmonically dissonant), Compatibility (it 'sticks out' of the music) and Coping potential (its implied size and power threaten the status quo).

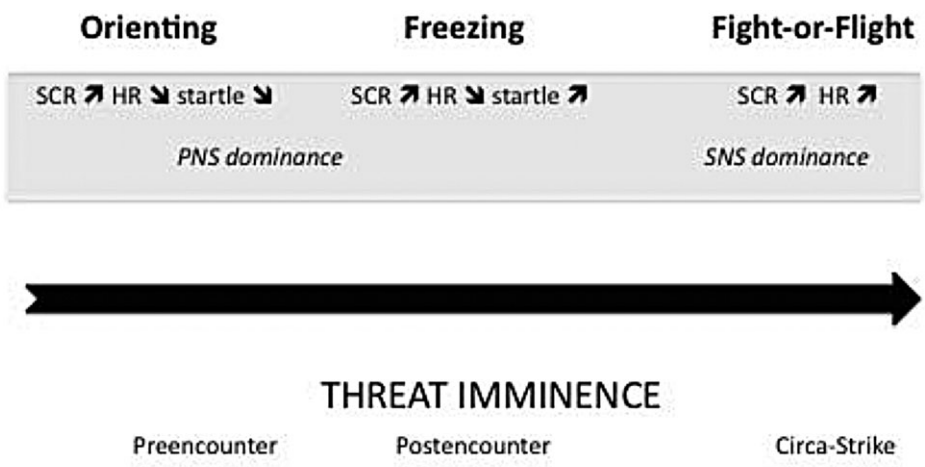
The mechanisms of appraisal theory have much in common with the perceptual principles codified by theorists of musical expectation such as David Huron (2006) and Elizabeth Margulis (2005 and 2007); Fear brings these two disciplines closest, since it directly involves uncertainty, expectation and shock. Where expectation theory tends towards abstraction, appraisal foregrounds judgement about how events impinge on wants, goals and interests. Bringing these two domains closer together – in the wake of advances by Huron and others – would improve our understanding of how emotional expression and induction in music relate to each other. For instance, the mysteriousness of the trill inheres as much in the expressive character of the material as in the listener's cognitive uncertainty. We feel what the music expresses. The pregnant pause in bar 9 of the Sonata in B♭ is literally a pause for perception: a novel stimulus in the environment – especially a very quiet one – invites attention. The listener's orientation to this stimulus induces a narrowing of focus, symbolised by the narrowing of intervallic contour to a semitone trill.

As a pointer to a convergence not only with appraisal and perception, but also with psychophysiology, consider Arne Öhman's threat-imminence trajectory (Fig. 7; reproduced from Öhman and Wiens 2003, p. 260). The threat's gradual advance (the arrow) traverses three stages (Preencounter, Postencounter and Circa-Strike), each associated with a type of behaviour (Orienting, Freezing or Fight-or-Flight). Each behaviour is in turn defined by a set of psychophysiological measurements. When the subject orients to the threat, his or her heart rate goes down and the startle impulse is inhibited. Freezing in the face of the threat involves 'startle potentiation': whether the subject chooses to attack or flee, heart rate increases, and the body is generally primed for action. Orienting is governed by the parasympathetic nervous system, which is associated with reflection and digestion. This yields to the sympathetic nervous system with Fight-or-Flight for strenuous activity.

Öhman's threat-imminence trajectory is richly suggestive for the analysis of musical Fear, as I shall show in my interpretation of the *Unfinished* Symphony.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 7 Threat-imminence trajectory, after Öhman



Key

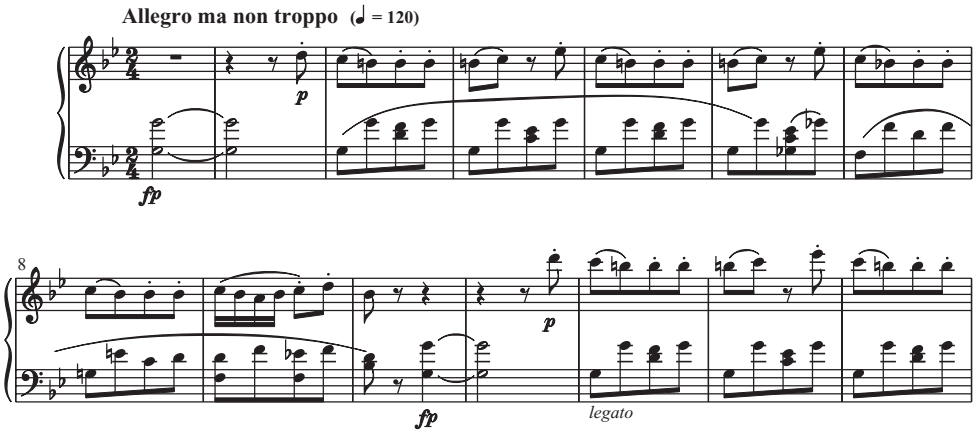
SCR = Skin conductance response
HR = Heart rate
PNS = Parasympathetic nervous system
SNS = Sympathetic nervous system

The virtue of his model is that it schematises the probabilistic openness of Frijda's action tendencies. That is, a musical pathway, like a human action, can navigate through an open set of possibilities. For instance, we will see that the *Unfinished* chooses Fight, whereas *Erlkönig* prefers Flight.

Schubert exercises compositional choice in another way, mixing and blending aspects of the expression and action models. I picked these works because they epitomise the extremes of expression (*Erlkönig*) and action (*Unfinished* Symphony). A Lied is immediately predisposed towards the expression model, while the grand journey of a sonata form foregrounds action. But the two models are really only starting points for subtle processes of interaction. A glimpse of Schubert's blending technique is afforded by the finale of the B♭ Sonata (Ex. 4). A mysterious G octave, perhaps a distant horn call, elicits a panicky rondo melody, running in flight to the supertonic, then into the arms of a provisional tonic sanctuary. From one perspective, this is a comically concise – and reiterated – threat-imminence trajectory, ending in fortunate escape (perhaps a long-delayed flight from the threats of the first movement?). From the opposite perspective of expression, it is a clockwise turn in affect space from a fearful utterance to a happy consolation. Indeed, the dialogue between Fear and Happiness is underscored neatly by the sequential pairing of two V–I progressions,

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 4 Schubert, Piano Sonata in B♭, iv, bars 1–14



G–C answered by F–B♭. And the traversed circle of fifths (G–C–F–B♭) gives a tantalising hint of an affinity between affect space and tonal space.

The *Unfinished* Symphony

Threat, struggle and defeat – for a piece of instrumental music without text or programme, the narrative of the first movement of Schubert's Symphony No. 8 in B minor is remarkably clear. Susan McClary concisely captures its meaning: '[a] victim narrative in which a sinister affective realm sets the stage for the vulnerable lyrical subject, which is doomed to be quashed' (1994, p. 225). According to Dahlhaus, a 'lyric urgency' is drawn 'into an oppressive, and ultimately tragic, dialectical process' (1989, p. 154). After the mysterious introduction and tremulous tonic group, the tender persona encapsulated in the second subject is overcome by the eruption of dark forces. Its meaning patently obvious, Schubert's trajectory ('narrative' is too discursive a term) draws its clarity and power from an underlying archetype; this archetype, I shall argue, is more an ecological affordance than a social construct, however 'symptomatic' it might be 'of the pessimism that prevailed in European culture in the 1820s' (McClary 1994, p. 226). As we shall see, the junctures of Schubert's movement are astonishingly congruent with the stages of Öhman's threat-imminence trajectory, internalised within the psychological drama of *Innerlichkeit*.

Threat

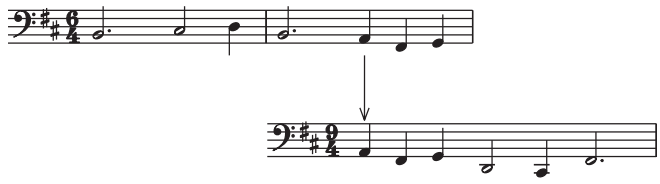
The symphony's introduction ('bass motto', according to Kurth [1999, p. 7]; 'preface theme' for Taruskin [2005, p. 109]) ticks every box for distant threat and mystery: low (cellos and basses), slow (the underlying *allegro* tempo emerges only with the semiquavers of bar 9), quiet (*pianissimo*), unaccompanied (unison or

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

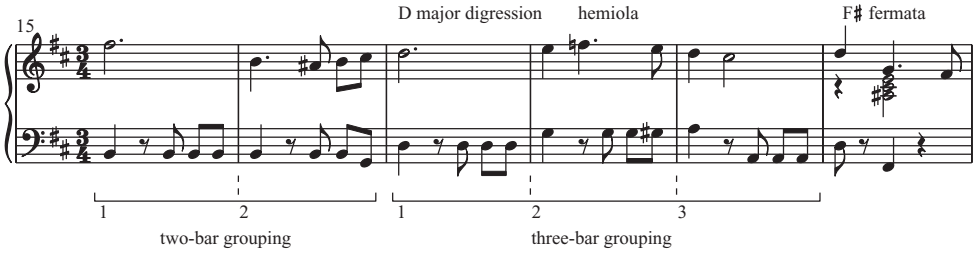
Ex. 5 Schubert, Symphony in B minor, D. 759, *Unfinished*, i, bars 1–8



Ex. 6 Schubert, *Unfinished* Symphony, i: hypermetrical modulation in introductory theme



Ex. 7 Schubert, *Unfinished* Symphony, i: path towards D major digression



octave textures are semiotically marked), interrogative (the final questioning F♯), functionally ambiguous (formal introduction or tonic group?) and ill defined both melodically and metrically (see Ex. 5). Melodically, as a deformation of the venerable descending-tetrachord lament emblem (*ibid.*), achieved through two complementary melodic infractions: the G's leap to D across bars 4–5 defies the lament's pull back to F♯; conversely, the C♯ at bar 5 leaps down to F♯, subverting the very returning motion to B set up by the B–C♯–B axial pattern at bars 1–3. Metrically, the phrase rhythm is even more complex than the 2 + 3 + 3 identified by Taruskin (*ibid.*). In fact, the B at bar 3 is initially heard as the onset of a second 6/4 hypermetrical group in answer to bars 1–2. But it elides into a 9/4 hypermetical haemiola pattern at bars 4–6 which projects a D major triad through the first beats of each bar (A–D–F♯) (Ex. 6). The conjunction of expansion, ternary hypermetre, haemiola and D major anticipates the path of the first group towards the D major digression of bars 17–20 (Ex. 7). Echoing the introduction, a hypermetrical two-bar grouping is contradicted at bar 17 by the onset of a three-bar unit in D major; as in the introduction, this is swept aside by an F♯ fermata. The introduction thereby fulfils two roles: it creates a fitting air of vagueness, suggesting an object lost in the distance; and it is highly implicative,

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 8 Schubert, *Unfinished* Symphony, i: primary group, bars 9–38



laying out the paradigm of a future holistic trajectory combining aspects of phrase rhythm, tonality and affect. This trajectory unfolds a drift from binary to ternary phrase rhythm – from fraught minor key towards a D major associated with lyrical expansiveness or standstill – interrupted by the F♯ reaffirming the opening affect.

After the 'real' tonic group enters at bar 9, establishing the *allegro* tempo, the introduction drops out of the exposition: even though the opening melody

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 8 *Continued*



furnishes the exposition with much of its material, after bar 9 it plays no role as a melodic gestalt. Yet it turns out, as Dahlhaus notes, to be 'a dominating idea of ever-larger proportions' (1989, p. 154). Thus, when this opening theme does return in the development, rapidly escalating into the explosive denouement at bar 170, it is hard not to hear the moment as the fulfilment of a threat-imminence trajectory climaxing in Fight.

Orienting

The primary group (henceforth referred to as P) is as much a frightened response to the frightening introduction as an anticipation of the denouement. Schubert flips subject positions: the introduction is an object of Fear, whilst the first group is the fearing subject (Ex. 8). The introduction induces Fear because

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

it is in itself expressive of quiet – that is, distant – Anger. A salutary benefit of the threat-imminence trajectory is that it corrects the arguable overemphasis in expectation research on the forward dimension of listening: here it bears stressing that listeners hear backwards as well as forwards. What are the elements which make P such an eloquent expression of Fear? The *tremolo* semiquaver texture (trembling) and the *pizzicato* quaver repetitions (pounding heartbeats) are classic signifiers, especially in modern film scores.[14] At a formal level, P exemplifies virtually all of Huron's criteria for the figurative, motivic and thematic repetition which constitutes tension in music.[15] Aside from the *ostinato* repetitions, the most dramatic formal instances are the two sequential phrase endings at bars 26–29 and bars 31–38, respectively open (V) and closed (I), which unfold waves of rising panic. Yet tension is also created by interlocking and dialectical interruptions of process. The two-bar *ostinato* figures in the first violins circle the dominant, fixating on the introduction's F♯ 'question' and incorporating a D–G scale which fulfils the promise of the introduction's B–C♯–D on a G crux. The leap to A♯ at bar 10 suspends the G locally by initiating another rising progression (A♯–B–C♯) whose anticipated goal, D, is denied by the fall to F♯ and the repetition of the *ostinato* at bar 11. The isolation of the C♯ is exacerbated by its dissonance with the G in the bass. The wrench from C♯ to F♯ is at first rehearsed by the group's more lyrical second module (P^1) across bars 14–15, and then resolved when the melody finally reaches D – both as a scale step and as a key area – at bar 17. And yet, at the level of phrase syntax, this D major resolution interrupts the more normative obligation of a consequent phrase towards the dominant; the interruption is itself interrupted when an F♯ half-close asserts its rights at bar 20, incorporating the striking leap noted earlier between D major and F♯ major triads; and the F♯s at bars 20 and 29 rub against plaintive Gs. Indeed, P's motions are hamstrung even before these two successive jolts on D and F♯: the anacrusic hypermetrical pairs across bars 9–16 swing through a I–IV–VII pendulum, the stress repeatedly falling on a subdominant harmony (bars 10, 12, 14, 16) which peculiarly undercuts the V–I suggestion of the melody at bars 13–16 (i.e. the melody here says F♯–B, the harmony B–E).

The busy texture and manifold interruptions project a split-level effect of surface frenzy and underlying paralysis – an impression of running on the spot. The effect is compounded by formal and metrical anomalies. Unusually, the tonic group as a whole cadences in the tonic, as if the music were circling back home. And the music's metre is a dual one, as Richard Kurth (1999) has demonstrated – its notated, or 'tonic', 3/4 belied by an implicit 6/8 metre. In many of Schubert's Lieder, compound metres in fast tempi set texts which describe running or galloping: see the 6/8 of *Der Musensohn* and – more pertinently – the implicit 12/8 of *Erlkönig* (the four crotchets of the bar subdivided by triplets).[16] The group expresses not flight from danger, but arrested flight – 6/8 'running' checked by the 3/4 surface metre (Ex. 9). Hence, Dahlhaus's detection in the group of 'a lyric tone which invites the listener to dally' (1989, p. 153) is slightly wide of the mark, since it discounts this element of forced arrest.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 9 Schubert, *Unfinished* Symphony, i: 3/4 against 6/8 metre in first subject



In all of these ways – melodic, harmonic, formal, and metrical – the music conveys what it is like to feel terrified. The cognitive correlative is speed combined, paradoxically, with both irresponsibility towards the material's tendencies (G and C♯ denied their resolutions) and a fixation upon crux pitches – G and D. This is the bewilderment of Fear, rushing about without thinking, hypnotised by a single stimulus so that one literally 'forgets' oneself, as Heidegger puts it (2000, p. 392). Forgetting stipulates the possibility of remembering. At stake in the arc of the movement is nothing less than the recovery of self, so that the story thereafter turns on a transformation of consciousness centring on aspects of the opening material. Approaching this story from the vantage point of emotion theory recasts a familiar topos of Schubert analysis: that his sonata forms are less about process than perspective – shifting views opened up by the formal landscape.

Freeze

After the cadence at bar 38, the movement is arrested by the celebrated horn and bassoon pivot progression, leading to a 69-bar second group, which, despite its expansiveness, amounts to a fleeting *Augenblick* – a *moment musical* frozen in time.[17] Schubert's freeze thus constitutes both the preparation and prolongation of the group. This is no play with words; I shall argue that the fit with Öhman's trajectory is both normative, in terms of the underappreciated character of minor-mode sonata forms; and biological, as regards the tensions which second groups induce in the listener.

Hepokoski and Darcy state that 'the desire to be emancipated from minor into major constitutes the basic narrative paradigm ... of minor-mode sonata form' (Hepokoski and Darcy 2006, p. 311). The status of second groups as 'havens or escapes from the minor-mode tonic' (*ibid*., p. 317) is heightened when S falls in VI, rather than III, as is the bittersweet feeling of the precarious and short-lived nature of this escape. One point where Hepokoski and Darcy could have gone further is in teasing out the self-conflicting character of second groups as unstable blends of lyricism and tension. Interestingly, Wundt's model of affect space originally comprised not two but three dimensions – valence, activation (arousal) and tension (see Eerola, this issue). Tension is usually eliminated from

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 10 Schubert, *Unfinished* Symphony, i: D–E–F♯–G scale recontextualised



present-day models, since its function can be covered by the other two dimensions in mappings of everyday-life emotions.[18] Nevertheless, music (if not art in general) suggests that tension is a prerequisite for the experience of aesthetic emotions. In categorical terms, lyric's tensive character is borne out by the intimate relationship between Tenderness and Fear. The swan waxes lyrical in proximity to danger or death, and Schubert's lyric productions were necessarily covert in Metternich's Vienna.[19] And this tensive character is central to the parallel I will pursue between lyricism and freezing at a psychophysiological level. In the natural world, freezing is a complex, contradictory behaviour, mixing stasis with high arousal. When confronted with danger, the animal will keep stock still; at the same time, freezing entails muscle contractions, which require high metabolic energy. As freezing continues and the creature prepares for either fight or flight, its autonomic nervous system (breathing and heart rate) becomes strongly activated. When one listens to music, one experiences muscle contractions and bated breath, as I will illustrate presently through a vivid report by Huron and an experiment of my own, both of which indicate that the parallel between lyrical standstill and freezing may actually be based in biology.

First, let us consider the many ways Schubert's second group mimics freezing in its mixture of standstill and tension. The pitch G, so prominent in P, is tonicised as the key of G. The D–E–F♯–G scale from P is recontextualized within S, stabilising the G crux (Ex. 10). Metrically, the leisurely new melody only seems calm. In Kurth's analysis: 'The second theme does not completely grant the "tonic" 3/4 metre the stability denied it by the first theme; instead, it deftly combines 6/8 and 3/4 in a barcarolle that masterfully "suspends" the tension between the two metres' (1999, pp. 19–20). Formally, the entire group composes out the gestalt of the melody's first bar in a way similar to that in which P elaborates its own premise, albeit towards stabilising rather than fraught ends. Thus in P, the I–IV–VII harmonic *ostinato* (bars 9–10, etc.) encapsulates the tonic group's repeated drift towards a dominant half-close at bars 20 and 29. By contrast, the architecture of S is concentrically arch shaped, projected from the

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 11 Schubert, *Unfinished* Symphony, i: concentric-arch shapes in S



three-part rhythm of the syncopated gestalt at bar 44 (Ex. 11): stable beginning (G crotchet), stressed and extended unstable middle (D dotted crotchet) and foreshortened return (G quaver). The ABBA structure of the first four-bar group can be heard in this way; moreover, the symmetry is echoed by the axial melody, circling the tonic with F♯ and A neighbours. At the phrase level, the four-bar tonic subphrase (bars 44–47) leads to a six-bar, harmonically migrant central subphrase (bars 48–53), with an implied closing subphrase elided into the *da capo* of the full phrase. It is a neat touch to tonicise the A, the upper neighbour of the melody's axial contour, within the middle subphrase's harmonic digression. The instability of the arch gestalt, innocuous at the local level of melodic syncopation or elided reprise, becomes catastrophically unbalanced at an architectonic level. It is common for second groups to bear their most dissonant material in their middle, in compensation for the lack of modulation (I have elsewhere christened these junctures in Mozart the 'expositional nadir' [Spitzer 2008, p. 196]). What is unusual in the *Unfinished* is the devastating intensity of the shock at bar 63 – perhaps the most arresting moment in the entire work – and the inability of the second group to fully absorb it (Ex. 12). The proportions are unbalanced, too: A occupies 21 bars (42–62), B 31 bars (63–93) and A′ 11 bars (94–104). The central panel is disproportionately long, and the *da capo* is not just foreshortened: its material is actually deformed, in a more human sense than is intended by Hepokoski and Darcy's term. According to their own narrative about this movement, '[i]t then proceeds as the "victimised" remainder of a multimodular S that, with much strain, pieces together the shards of a shattered S^1 to secure the EEC in bar 93' (Hepokoski and Darcy 2006, p. 183).

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 12 Schubert, *Unfinished* Symphony, i: shock at bar 63



It is worth pondering why the catastrophe at bar 63 is more shocking than anything in the first group – 'sublime' in its 'unforeseeability', as Kurth aptly puts it (1999, p. 30). In P, the G cruxes (bars 20 and 29) were crests of sequential waves, smoothly integrated within an art of transition. It is significant that the melodic note at bar 63 (in the woodwinds, horns and second violins) is also a G. But there is maximum parametric contrast between bars 61 and 63, compounded by the bar's rest: *pianissimo*/*fortissimo*, light strings/*tutti*, short notes/sustained notes, *legato*/*tremolando* and delicate melody/wall of sound. Harmonically, bars 20 and 63 deploy tonal non sequiturs (both from D triads) to opposite effect. With the mediant shift from D to F♯ at bar 20, it is the shift itself which sounds dysfunctional, not the goal harmony, which is a normative dominant half-close. At bar 63, the tonal wrench from a D triad to C minor also interrupts the cadence. In brief, the G interruption at bar 20 is purely melodic, since the dominant ninth harmony is normal; at bar 63, the F♯ in the melody is granted its deferred resolution on G, but the harmony is aberrant.

For these reasons, the shocks associated with G are literally more startling in S than in P. Freezing, according to Öhman's schema, is attended by startle potentiation. Conversely, orienting involves startle inhibition, allowing the subject to focus at leisure on the threat. The technical name in psychology for priming the startle reflex, thus attenuating the subject's responsiveness to shock,

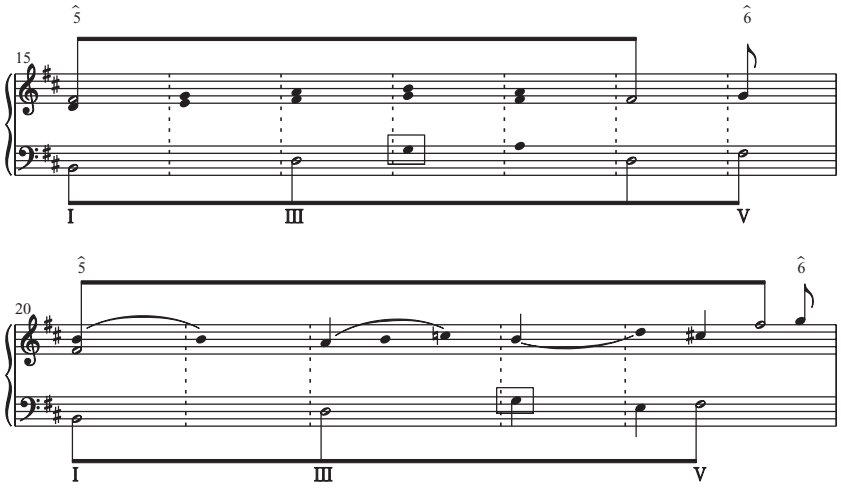
© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

is 'prepulse inhibition': '[t]he amplitude of the acoustic startle reflex, elicited by a brief, loud burst of noise, can be reduced reliably when briefly preceded by a weak stimulus which itself does not produce a startle response' (Campeau 1995, p. 267). The semiquaver Gs, woven into the *ostinato* figures from bar 10, prime the listener for the *forzando* G of bar 20, so that the shock is felt as a matter only of cumulative degree. The event at bar 63 sounds different in kind – as something genuinely new, and unforeseen. In other words, P and S engage opposite modalities and directions of gaze. P looks backwards, orienting itself to the threats of the opening and gradually zooming in on the crux note G. With S, the music's forensic focus turns inwards with the blind self-absorption of the lyrical persona. In fact, shock is the natural dynamic for lyric idioms, since, by definition, they forgo the processive rhetoric of narrative, presupposing an 'abruptly discontinuous temporality', in David Wellbery's words (quoted in Kurth 1999, p. 30). Lyrical forms are fragmentary constellations of unforeseeable moments.

Thus the parametric stage setting of the contrasting interruptions at S and P is really only a symptom of more fundamental qualitative differences between orienting and freezing functions. Schubert's harmonic language supplies the richest evidence for these qualitative differences. Again, the issues centre on G, a note with which the listener is 'programmed to identify', according to Taruskin (2005, p. 112). The sixth scale step affords particularly broad potential, since it can be allied to both dominant and subdominant functions in different ways. (For the sixth scale step as neighbour-note VI, see Beethoven's Ninth Symphony; for an example of the sixth scale step as a third-divider, I–VI–IV, see the first movement of his Sonata in C minor, Op. 111.) It can thus be a party to processes of tension or relaxation. In P, the note G is increasingly drawn towards the dominant. The second bar of the *ostinato* figure (bar 10) encapsulates this trajectory: in the first half of the bar, G has a subdominant function; in the second half, G falls to the bass, supporting a VII harmony which substitutes for a dominant. G is fleetingly tonicised at bar 18, more strongly at bars 27–28 and 32–33 (see Ex. 13), at these points only as part of a rising bass arpeggiation, B–D–F♯ (this more leisurely version at 27–28 fills in the D–F♯ non sequitur of bar 20 with an E passing note in the bass). And Gs feature in the dominant ninths which epitomise the climax of Fear. By contrast, the Gs in S are subsumed within a trajectory towards subdominant function. Formally, an S in VI in a minor-mode sonata has two options, from a Schenkerian standpoint.[20] It can either sit as a neighbour to an eventual V or behave as a third-divider within the descending fifth I–IV, with IV reached in the development. In Schubert's second group, the two tendencies coexist in tension with each other, with the neighbour option eventually ceding to the descending-fifth pathway. Initially, the tonicisation of G at bar 42 is heard by analogy to the G neighbours of bars 10, 20 and 29; the horn caesura fill spells out the connection, echoing the D–E–F♯–G scale of the *ostinato* (bars 9–10) as well as filling in the D–F♯ tonal wrench of bar 20. The lead-back to the *da capo* repeat, at bars 105–110, where G major shifts back into B minor via a G–F♯ side-slip, confirms this orientation. In between these points, however,

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 13 Schubert, *Unfinished* Symphony, i: G tonicised as part of I–III–V arpeggiations



Ex. 14 Schubert, *Unfinished* Symphony, i: complementary nine-bar blocks



Schubert strengthens the subdominant. The main tonal business is staked out through a deceptive rhyme between two nine-bar panels: bars 63–71 and 85–93 (Ex. 14). The two blocks look and sound very different, and they project contrasting affects, respectively Fear/Anger and triumphant joy – that is, highly activated Happiness. They are united not only by their similar lengths and levels of high activation (arousal), but also by complementary ways of interpreting the subdominant. At bar 63, V–I in G is interrupted by a subdominant chord in the minor. At bar 85, V–I in D major is interrupted by the tonic chord in G major,

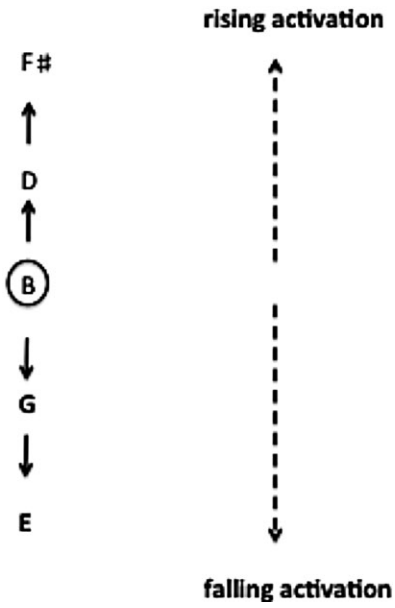
© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

which is nonetheless set up as a subdominant interruption of the dominant key. Coming after twelve bars spent preparing D major (framed by the A^7 chords at bars 73 and 81–84), the G tonic at bar 85 is re-established via a vertiginous drop of a further fifth to C and the passing tonicisation of the secondary subdominant at bars 86–88. The relationship between the two passages turns on a harmonic sleight of hand involving two complementary subdominant trajectories. In trajectory 1 (bars 63–71), the IV chord is transformed in four steps from IV to VI to augmented VI (all in G) to VII (of D). That is, in setting up the following twelve bars of dominant preparation, the culminating VII chord has completed the destabilising force of the interruption at bar 63, wrenching the tonality of S away from G major towards the more normative III (D major would, of course, have been the more usual secondary key for a minor-mode sonata form). In trajectory 2 (bars 85–93), a G major chord is transformed in three steps from IV of D (bar 85) to V of C (bars 86–88) to I of G (bars 88–93). Thus, D major, the 'counter-tonic' of S, is actively denied by presenting G major as a subdominant interruption. Afterwards, the B minor lead-back at bars 105–110 is counteracted by the turn to E minor at the start of the development. The development is centred almost entirely on that key.

Comparing Schubert's pathways in affect space and tonal space opens up interesting perspectives, although these two domains cannot be mapped onto each other directly.[21] If G in P is associated with D as a third-divider in a rising fifth arpeggiation (B–D–F♯), and G in S with a third-divider in a falling fifth (B–G–E), then the trajectories of the two groups devolves to an axial progression of alternately rising and falling thirds around B: B–D versus B–G (Fig. 8). The polarity between D (upper third) and G (lower third) is reflected in the melodic profiles of P and S. In terms of affect space, the fleeting D major episode of bars 17–20, which sounds like an intimation of S Tenderness in melody, mode and metre, passes *en route* to the Fear of F♯ within a trajectory of rising activation; by contrast, G is part of a motion to confirm Tenderness through relaxing subdominant progressions, where it had been previously denied. Without delving too deeply into harmonic theory, it is enough to note that Schubert's axial harmony is distinctive for combining tonal symmetry with tonic centricity – two criteria which do not necessarily go together in nineteenth-century dualistic harmonic systems.[22] It would also be interesting to explore the promising affinities between affect space and the tonal space of the neo-Riemannian *Tonnetz*, despite some basic conceptual differences. Neo-Riemannian harmonic theory privileges major-third progression, as in Richard Cohn's article (1999) on Schubert's Piano Sonata in B♭, D. 956, whereas the harmony in the *Unfinished* favours minor-third progressions. In P, B minor rises to D major; moreover, it makes better musical and affective sense in the symphony to hear G major as an agent of the subdominant E minor rather than as a member of the tonic major-third cycle (which would be, theoretically, B–G–E♭–B). The G major second subject's fraught Tenderness, pitched Janus-like between dominant (G–F♯) and subdominant (G–E), makes it very hard to hear it as part of a prolongation of the tonic

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 8 Axial harmony in Schubert, *Unfinished* Symphony/i



group's system (as is the case in Cohn's analysis of the G♭ 'purple patch' [1999, p. 222 n. 28], and most of the transition, in D. 956).[23]

Another way of looking at this comparison is in terms of smoothness of transition. P and S both feature transitions between affectively contrasting blocks. The Tenderness of bars 17–20 and the Fear of bars 20–21 are distant in affect space, contiguous formally and smoothed over by commonalities of textural and melodic material. The Anger of bars 63–72 and the Happiness of bars 85–93 are contiguous in affect space (on the basis of shared high activation), and distant formally (12 bars apart), and they employ distinctly different kinds of materials and phrase rhythms (a 'stream of noise' vs. a repeated cadential model). Although the affective contrasts in S are broader and starker, they elaborate an astonishing affective modulation, by virtue of the twelve-bar linking passage. Bars 73–84 unleash the 6/8 'running' metre for the first time in the movement, expressing the Fear of flight initially *piano* and eventually *fortissimo*. The crescendo, together with the link passage's minor/major ambivalence, brings out the hedonically joyful undercurrent of flight: as was said, the majority of Schubert's 'galloping' Lieder express the pleasures of the chase.[24] The mix of Fear and Happiness in these figures enables the passage to behave as a pivot between the Anger of the interruption in bar 63 and the triumphal Happiness of the parallel passage at bar 84: it is an affective pivot, just as the D pedal at bars 38–42 is a tonal pivot. More important it allows the climax at bar 84 to channel the high activation of the bar 63 interruption to positive ends, transmuting Anger into Happiness. This affective modulation is an emotional correlative of the passage's

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

interchange of tonic and subdominant harmonies: that is, G major 'coming into itself' as the subdominant of D.[25] To return to Heidegger, if the Fear of P represents an impoverishment of self, then the Happiness of S marks a triumphant fulfilment of subjectivity, when the group fully attains the status of a persona we actively care about.

With the blossoming of this persona, the nature of our fear changes. We fear *with* P; we fear *for* S. The music's emotion splits between what the material expresses and what we feel about it. It is hard to resist appealing to one of the prototypes of such splits in cinema, one often discussed in cognitive film studies, namely, the disjunction at the start of *Jaws* between the Happiness of the female swimmer, oblivious of the lurking danger, and the mounting anxiety of the viewer, privy to the threat-imminence trajectory of John Williams's approaching-shark motive (see Biancorosso, this issue).[26] There is every reason to think that the viewer's/listener's anxiety could be measured psychophysiologically. Here is Huron's account of his own feelings listening to a comparable passage in Beethoven's *Emperor* Piano Concerto:

> Around measures 419 or 420 I find that the sense of relaxation wanes and I become acutely tense. Four measures later, the passage will end abruptly with a full orchestra *tutti* playing a strident sequence of block chords (beginning just before measure 424). Oddly, the tension I feel arises at least a dozen beats before the anticipated *tutti*. Although I am still hearing that delicate lyrical line, my body already starts to prepare for the inevitable boisterous interruption. My muscles feel tense and my ears feel like they are squinting – as though I am preparing for an explosion. (Huron 2006, p. 319)

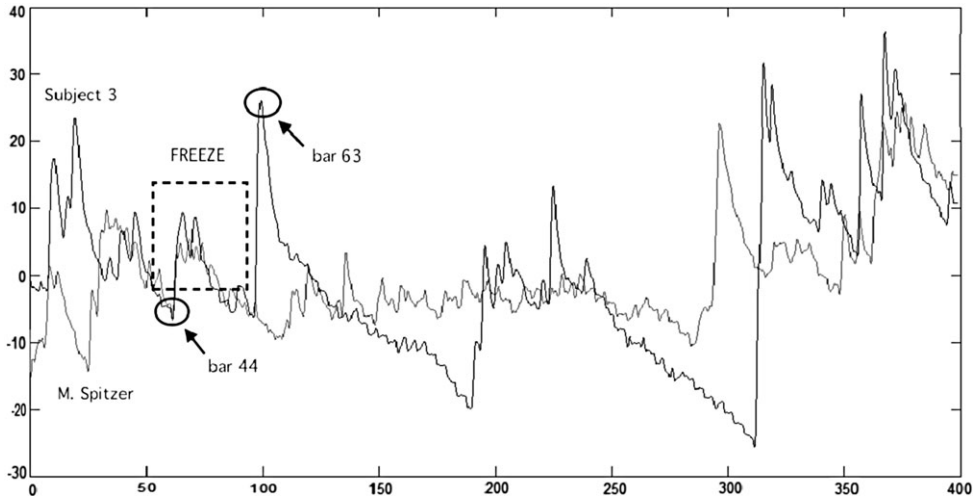
By his account, Huron does not refer to the scenario of Fear, but his body is displaying freezing behaviour. It is striking that both in the Schubert and Beethoven, the tensive character of freezing embraces the contradictory relationship between music and listener, who come into their own at cross-purposes. That is to say, the point where the music consummates its persona coincides with the moment where we become most aware of our own bodily reaction; and this opens a yawning chasm between what the music expresses and how we feel about it – caring and fearing for it at the same time. This paradox is just the most drastic instance of the conflicting pulls of freezing behaviour.

An Augenblick *at Belfast*

In preparing this essay, I thought it would be interesting to measure my own physiological response to Schubert's freeze. Tom Cochrane and Ben Knapp, who work at the Sonic Arts Research Centre at Queen's University, Belfast, kindly offered to run some tests, comparing my reactions as an expert listener with those of several subjects with no background in Classical music and who were not familiar with Schubert's symphony. The tests targeted the galvanic skin response, and their results are summarised in Fig. 9. The galvanic skin response

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

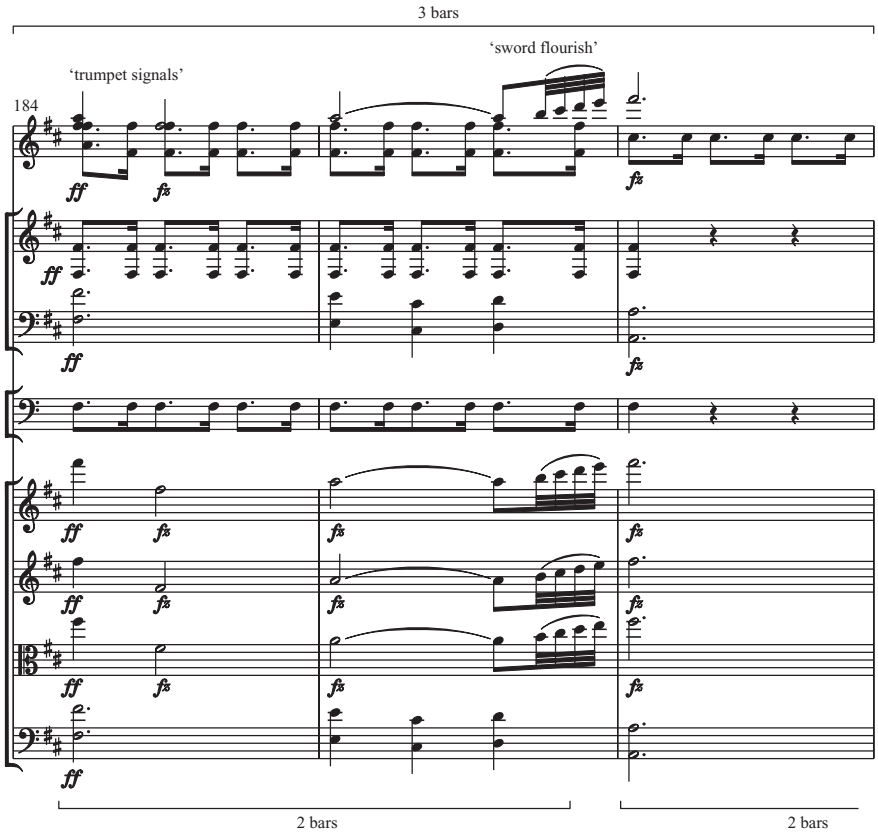
Fig. 9 Galvanic skin response graphs for Schubert, *Unfinished* Symphony/i



(GSR) is a measure of increased perspiration, which is generally linked with responses that prepare the body for action, especially the emotions Fear and Anger.[27] Increased sweat reduces electrical resistance and thereby raises skin conductivity. The vertical axis in Fig. 9 shows the amount of skin conductivity (measured from sensors on the subjects' fingers);[28] the horizontal axis indicates number of seconds in the recording of the first movement of the *Unfinished* Symphony. Fig. 9 compares my own GSR graph with that of Subject 3, the listener who had the most similar response.[29] Subject 3's response strikingly mirrors the gross dynamic profile of the music, as one might expect: there is a trough in his or her graph in the quiet passage just before the entry of the second subject at bar 44, and there is a spike at the loud shock at bar 63. Curiously, I seem entirely unresponsive to bar 63; indeed, my GSR graph continues to dip at this point. Perhaps overfamiliarity has inured me to Schubert's shock. But if that is the case, then the most remarkable feature of Fig. 9 is the close convergence of Subject 3's and my own GSR graphs across the eighteen-bar (40-second) passage between bars 44 and 62: Schubert's freeze. It bears stressing that this is the *only* sustained passage, across the entire first movement, where our readings do converge. And given my apparent impassivity before the *fortissimo* of bar 63, it is all the more thought-provoking that I remain responsive to the tensions of the second subject. It is equally puzzling, *pace* Huron's self-report above, that my responses are the same as those of a listener who cannot be anticipating any imminent crisis point, because he or she does not know the work and is not familiar with the style. Perhaps the freeze response is immune to familiarity with the music.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 15 Schubert, *Unfinished* Symphony, i: development, 'battle music'



These speculations are premature: a lot more data is needed than is afforded by our hopelessly small sample of four experimental subjects. On the other hand, it would be astonishing if the convergence of the GSR graphs with the analysis of the music was a coincidence.

Fight

The battle music at the high point of the development (bars 184–194), furnished with military topics such as dotted drumbeats, real and imitation trumpet signals[30] and swashbuckling sword-like flourishes reminiscent of Don Giovanni's duel with the Commendatore, confirms that the threat trajectory has climaxed with Fight, rather than Flight (Ex. 15). Schubert's 'victim narrative' weights the conflict heavily against the persona identified with the second subject: its 'quashing' (McClary 1994, p. 225) is made very clear by the immediate run-up to the *fortissimo* statement of the preface theme in bars 166–70, where S's vestigial remains – its vamping syncopated accompaniment – are

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 15 *Continued*

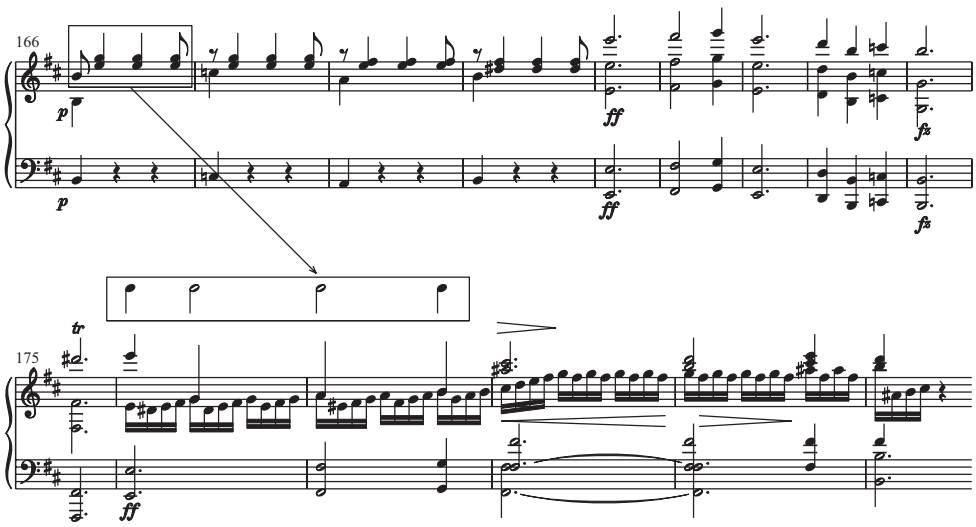


summarily dismissed (recall Janet Levy's convincing hearing of 'authoritative control' [1982, p. 507] in loud unison textures). S's syncopated vamp is not entirely liquidated, however (Ex. 16): its ruins are woven into the bass motto's frenetic countersubject from bar 176, where the semiquaver runs outline the syncopations in augmentation (the pattern quaver–crotchet–crotchet–quaver doubled to crotchet–minim–minim–crotchet). The vestiges of S seek to run away, but are pinned down by the motto's overbearing mass – just as the 6/8 'fleeing' metre had earlier been frustrated by the 3/4 'tonic' metre. The conflict becomes hypermetrical in bars 184–194: the bass drives along in two-bar units, while the melody groups as 3 + 1 (the inverted trochee, rising $\hat{1}$–$\hat{3}$–$\hat{8}$ arpeggiation and demisemiquaver uprush all serve to weld the three bars into a single gesture).

The affective correlative of conflict, or Fight, is Anger. Schubert's development is frightening because it is in itself expressive of angry behaviour (attacking, interrupting, overwhelming, destroying), as well as displaying angry expression *per se*, such as growling. Aggressiveness in music has been linked to growl-like timbre, combining auditory roughness and loudness.[31] Of the acoustic cues associated with Anger, including disjunct and spiky melodic contour, sheer

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 16 Schubert, *Unfinished* Symphony, i: augmentation of S vamp

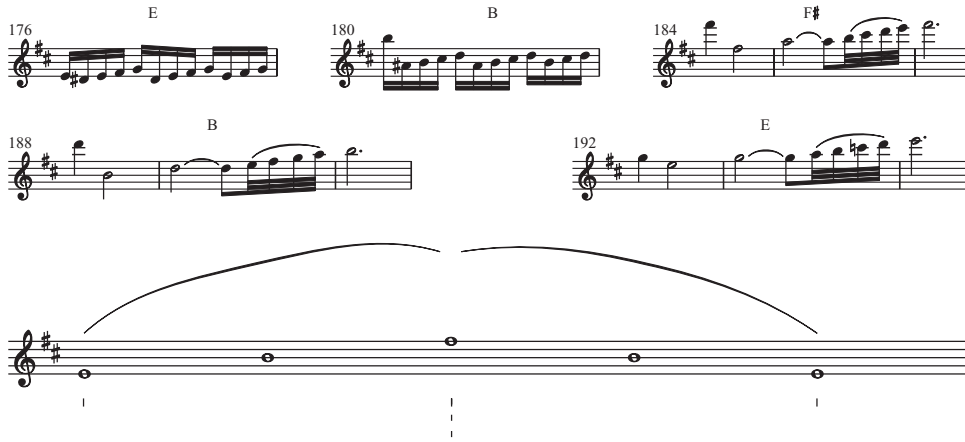


dynamic loudness is perhaps the most critical, yet its role in influencing perception has been surprisingly neglected. The development's sustained *fortissimo* dynamic is allied to sound level (induced by multiplying sound sources, such as orchestral instruments) as an indicator of the 'subjective sense of auditory size, mass, or spaciousness' (Huron 2006, p. 323). The attacking agency is large. Loudness is also kindred with 'sensory dissonance' – compared by Huron to 'visual glare' – whereby dissonant sonorities degrade our ability to hear other sounds in the music (*ibid.*, p. 325). Loudness, sound level and sensory dissonance compel the listener with the force of the music. If the *pianissimo* of fearful music, such as P, *invites* perception, orienting around detail, then the loudness of the angry development *resists* perception of detail, impinging on the listener with an excess of information at too high activation. The former draws us in (approach behaviour); the latter pushes us away (withdrawal behaviour).

The formal analogue of the development's perceived size is its tonal monumentality. It is astonishing that, aside from a sixteen-bar retransition, the development centres on one key, E minor. Its two halves begin and end on that key. Part I (bars 114–175) rises through the upper tetrachord with a dramatic series of tonal shifts through B minor (bars 134–145), C♯ minor (bars 146–153) and D minor (bars 158–164), climaxing with the E minor statement at bar 170. Part II (bars 176–195) comprises a twenty-bar sequential treatment of the headmotives belonging to the preface theme. Knitting together five four-bar phrases into an elegant arch of rising and falling fifths (E–B–F♯–B–E), the sequence constitutes the biggest coherent block in the movement (Ex. 17). In its length, symmetry (beginning and ending in the same key) and leisurely four-bar pacing, the sequence differs markedly from the brief sequential flurries of the exposition

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 17 Schubert, *Unfinished* Symphony, i: sequential block



(especially bars 26–29 and 31–35). Rather than mounting anxiety, the impression made by this deliberative circumscribing of tonal space is of energies unleashed whilst contained with masterly control. 'A unique function of the experience of anger,' according to Izard and Ackerman (2004, p. 259), 'is that of mobilizing and sustaining energy at high levels'. It 'sustains goal-directed activity', but in a peculiarly 'blind' fashion, proceeding in a sequential chain of spurts and spikes rather than with the long-term discursive planning typical of more positive affects. Never seeing further ahead than the next sequential shift, the development remains paradoxically stolid in its moorings to E minor.

The climax is threatening not merely on account of its weight and size, but also because of the perceived motion of the threat, across the length of the movement, towards the listener. James Gibson's notion of visual 'looming' ([1979] 1986, p. 132) – extended by psychologists to that of auditory looming – captures this effect. The approach of a threatening object causes animals and people alike to make adaptive avoidance responses, such as ducking, flinching, or jumping back. Similar responses are made to approaching sounding sources, where looming can be indicated by both rising acoustic intensity and the 'brightening' of the sound's timbre through 'selective amplification of high-frequency components due to differential atmospheric absorption' (Rosenblum, Wuestefeld and Saldaña 1993, p. 1480). In a movement unusually marked by dynamic crescendos – the most-discussed index of auditory looming in art music[32] – Schubert's master stroke is to position the exposition as, in effect, a build-up to the development, commuting the tonic B minor into the 'dominant' of E minor. The 'rise' from B to E, encapsulated in the I–IV harmonic pendulum of P's *ostinato*, is filled out in the sequential key shifts in bars 114–175; it may also, perhaps, explain why the symphony succeeds so well as a two-movement torso. We hear the E major second movement as a redemptive sublation of the E minor

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

catastrophe of the first; the first movement, in effect, looms into the second. Auditory looming, however, is most patent at the climax itself, where the strings' muscular rising scale of a twelfth (bars 176–183), underscored by the timbral brightening of the wind and brass entry, plus hairpin crescendos, suggests a series of aggressive feints towards the listener. The subsequent demisemiquaver rising sixths (bars 185–194) – what I identified as the '*Don Giovanni*' sword thrusts – thus function as intervallic (twelfths → sixths) and durational (semiquavers → demisemiquavers) liquidations of the 'looming' scale figures. A quasi-visual sign – the sword gesture – takes into itself the prior trajectory of looming. Only musical logic can achieve such a complex act of blending.

The complexity of Schubert's climax is often ill-served by the 'volcanic' commonplace of Schubert reception, as well as an uncritical notion of the sublime, with which it is kindred. Adorno's essay on Schubert conjoined the volcanic and the sublime in a fashion whose sophistication still spurs contemporary interpretation: '[h]e who crosses the threshold between the years of Beethoven's death and Schubert's will shudder, gripped by a sense of awe like someone might feel who emerges from a rumbling crater, recently formed and still cooling' (translated by Max Paddison in Paddison 2009, p. 53). 'Shudder' (*Schauer*) suggests Fear; yet Paddison points out that Adorno borrowed the term from Kant's account of the sublime: '[t]he spectator gazes on the scene of a frozen cataclysm, and experiences not only a shiver at its coldness, but the aesthetic "shudder" (*Schauer*) and awe described by Kant' (Paddison 2009, p. 49).

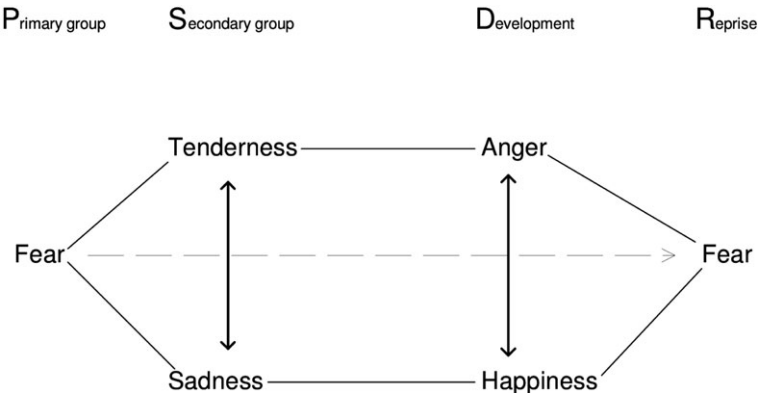
The sublime is in some ways the elephant in the affective landscape, and I will propose that it holds the key to understanding how the emotions in this symphony fit together.

Refracting the Sublime

Fig. 10 configures the emotions unfolded by Schubert's threat-imminence trajectory towards the developmental climax. By attaching Sadness and Happiness, respectively, to the second group and development, thereby completing the set of five basic emotions, I answer the challenge of Russell's circumplex map to provide a realistic model of a particular affective pathway in real time. I see four of the emotions as gravitating towards the fifth, Anger, epitomising the category of the sublime. In his later work, Russell sought to schematise particular emotions as prototypical scripts – take, for instance, his five-step script for Anger, by which the person is offended, glares and scowls, feels internal tension and finally loses control and strikes out.[33] More a constellation than a script, my model keeps all five basic emotions in play as attitudes towards the Anger climax. A constellation, as Walter Benjamin, writing in 1925, saw it,[34] is a network of interdependent concepts, kindred to yet more dialectically mobile than Wittgenstein's notion of family relationships, Russell's fuzzy sets or Lakoff's cluster models.[35] Kant's definition of the sublime is a constellation, and we can single out the five emotions it subsumes:

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 10 Schubert's sublime constellation



> The astonishment, amounting almost to terror [Fear], the awe and sacred thrill [Happiness] of devout feeling, that takes hold of one when gazing upon the prospect of mountains ascending to heaven, deep ravines and torrents raging [Anger] there, deep-shadowed solitudes that invite to brooding melancholy [Sadness], and the like – all this, when we are assured of our own safety, is not actual fear. Rather is it an attempt to gain access to it through imagination, for the purpose of feeling the might of this faculty in combining the movement of the mind thereby aroused with its serenity [Tenderness], and of thus being superior to internal and, therefore, to external, nature, so far as the latter can have any bearing upon our feeling of well-being. (Kant [1790] 1989, pp. 120–1)

A representation of Anger ('raging' torrents) yet a 'source of Fear' (*ibid.*, p. 109), the sublime is nonetheless a cause of 'emotional delight' (*ibid.*, p. 100) in a subject who exults in the autonomy of his or her powers of reason in mastering magnitudes which defeat the imagination. We can 'feel this soul-stirring delight' because our rationality permits us to 'see ourselves safe' (*ibid.*, p. 112).

One major omission from Kant's constellation is the element of time and, on a broader scale, history. Subject to time in Schubert's Symphony, the sublime gains emotional traction because it moves – approaching, looming, erupting. The fear of P anticipates the storm, and the Tenderness of S elicits pathos at its precarious hiatus in the build-up to the climax. The rage of the development is also exhilarating as a discharge of anticipation and as a rousing noise in itself. The slots for Happiness and Sadness in my constellation need further comment, because they bring forward the importance of emergent emotions in aesthetic appreciation – emotions which diverge markedly from what is represented by the musical material. The idea that raging torrents can be thrilling draws on the productive ambiguity of Kant's freighted notion of *heilige Schauer* (sacred thrill). *Schauer* can mean the thrill or shudder of joy as well as that of fear, as in Heine's poem 'Frieden', from his *Buch der Lieder* (1827): 'und schauernd in Liebe und

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

süsser Entsagung' ('thrilled with love and sweet renunciation' [Heine 2006, p. 165]). Kant's notion of thrills is strikingly paralleled by physiological studies of 'chills' in music (the shivers-down-the spine effect). According to a classic study by Anne Blood and Robert Zattore (2001), listeners' responses to self-selected examples of intensely emotional musical passages are similarly mixed, with symptoms both of extreme fear (changes of heart rate, electromyogram and respiration) and euphoria (activation of brain structures associated with the deep pleasure afforded by food, sex and drugs). The emotions' physiological affinity parallels the interpretative pleasure listeners gain from making sense of challenging (that is, dissonant or disruptive) music. In formalist terms, the sublime is enacted in the conflict between recalcitrant or 'stormy' material and the listener's 'heroic' powers of interpretation.

If Happiness emerges out of Anger and Fear through conflict, then Sadness relates to Tenderness as separation anxiety.[36] Paddison's epitaph to the Adorno essay refers to all Schubert, but it is particularly apt to the Symphony's second subject:

> To say that Schubert's music simply represents lamentation misses the point. The music evokes lamentation in us because it shows us the irreconcilable split between our situation in reality, which is that of the transience of all things in the face of our own mortality, and the possibility of redemption and reconciliation, which seems to be promised in the experience of Schubert's music. (Paddison 2009, p. 58)

Worlds away from Huron's cognitivist perspective, Paddison's philosophical interpretation nevertheless registers an analogous gap between temporality and tension in the listener and static lyricism in the music. These terms are deepened and broadened, however, so as to encompass values which are off limits to psychological approaches to emotion, taking in far-reaching notions of 'nature, history, transience, decay, and mortality' (Paddison 2009, p. 43). I have written elsewhere of the difficulty of making one-to-one connections between philosophy and an empirical subject such as music analysis.[37] The problem is that, with the dialectical shuttling between terms, aspects of nature and reason can be found not only in the temporality of P, but also in the timelessness of S, both of which can be conceived as a threat from the other's point of view and inspire Fear. Before we review these vantage points, let us consider one specific empirical fact: S's Tenderness cleaves to P's Fear in an act of mimesis. In the landscape of Schubert's Symphony, the second group, as an extended lyric moment, isn't simply set apart from P: it is constituted, as we have seen, from elements of the first group, frozen and transmuted, transfiguring particles of Fear into Tenderness. In S's imitation of P, we are reminded that Adorno's concept of mimesis was itself biological in origin. According to Paddison, 'mimesis could be understood as a form of copying, or identifying with, the outside world in order to protect oneself from a threatening environment, as a means of survival' (1997, p. 140).

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

The object and the subject of Schubert's Fear can be viewed from opposite perspectives. On the one hand, the urgent temporality of P frightens S into an act of withdrawal as lyric interiorisation. On the other hand, S's freezing leads to reification, which constitutes the primal, and most fearful, threat to art in general. In Paddison's words, the threat, from art's point of view, is 'the process of rationalization which characterizes the outside world, means-end rationality itself' (1997, p. 141). Thus, in its schematic formalism, what S imitates is not P in particular, but inimical forces of commodification at large. Put otherwise, the beauty of the lyric moment is not to be trusted, as so often is the case in Schubert; it is a shining semblance (*Schein*) which veils a more authentic reality. This revalorises the volcanic metaphor, with the magma of history and temporality revealed as an agent of aesthetic authenticity. Recognising S as an imitation of P, we grasp the lyric moment as a transient episode of petrification in an endless cycle of congealing and erupting historical forces. History congeals into a semblance of nature whenever time is spatialised, including the crystallisation of musical form in general, and of lyric forms in particular.

In the end, both subject positions are intertwined inextricably yet processually in an ongoing dynamic which is registered in S's metrical *Schauer*, to choose the metrical parameter over a host of others. In the light of Adorno's Schubert essay, the 'trembling' of S is a reverberation of the sublime. Schubert's lyric forms are discovered to be cases of a frozen sublime, aftermaths of a cataclysm, which elicit an aesthetic shudder in the listener precisely because they are frozen. Of course, these internal tensions will presently break out when the music's semblance of standstill is stripped away, leading to the future storm. But it is important to recognise that temporalising the sublime can have a retrospective as well as a forward dimension: the sublime can loom in the future, but it can equally well be remembered (as is borne out most broadly in the second movement's recollection of the first).[38]

While its lasts, the lyrical moment – an 'afterimage of the primordial shudder' (Paddison 2009, p. 50) – is a figure of both hope and despair: hope, because it expresses the Tenderness of aesthetic reconciliation; despair, since the fragility of its resolution is so frighteningly patent. Adorno hears Sadness in the very gap between tender promise and fearful reality: '[w]e cry without knowing why, because we are not yet as this music promises; we cry in the unnamed happiness that [Schubert's] music only needs to be as it is in order to assure us that we shall also be like this one day' (translated in Paddison 2009, p. 48).

Der Erlkönig

In many ways, Schubert's *Erlkönig* presents a counter-example to the *Unfinished* Symphony. It chooses – and explores the attributes of – Flight rather than Fight. As a Lied, its predisposition towards the expression rather than the action model is motivated by the question-and-answer format of Goethe's verse. And its relationship to the threat-imminence trajectory is far more playful, in the semi-

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

otic sense of sign manipulation. Where the Symphony proceeds through the three stages of the trajectory in order, *Erlkönig* begins at the end, with the father fleeing with his son on horseback from the supernatural (or imaginary) threat of the Erlking. (Note Monelle's discovery that the topic of a horse galloping was associated with backward glances.)[39] Another cause of the Lied's complexity is the particularly fraught counterpoint between the action and expression models. Setting up this counterpoint, the first verse is itself a response to the piano's representation of action, whose conventionalised signs of a horse galloping, if at all in doubt, are retrospectively confirmed by the word 'reitet' ('rides').[40]

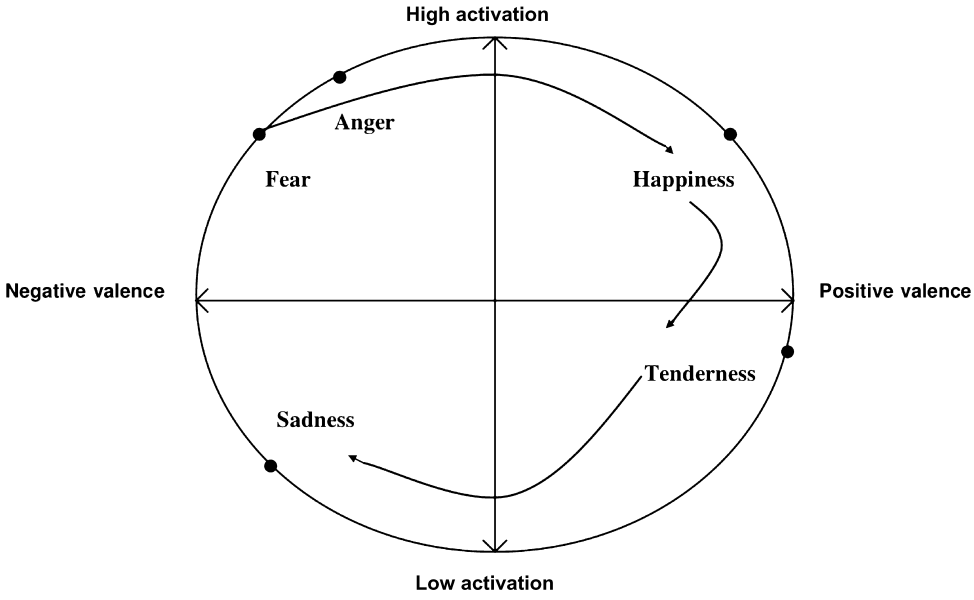
The entry of the words, underscoring rather than defining meanings that are already partly intrinsic to the music, brings forward the issue of how language, including semantic lexicons, constructs emotional experience. Obviously, text and narrative have taken centre stage in analyses of Lieder. But the view from the perspective of emotion theory highlights different issues. Russell had been careful to stipulate that his affective circumplex plays a role in how lay people conceptualise emotions and is not merely a set of external labels applied by theorists. Yet his concession that 'people are not typically aware of all the pieces of information they rely on in analyzing their own emotional states' (Russell 1980, p. 1176) raises the broader dilemma of whether emotions are culturally (albeit unconsciously) constructed or biologically universal. In practice, the opposition of constructionist and essentialist is filled out with myriad nuanced positions, one of which will serve as the coda of this study. In principle, it underwrites Tuomas Eerola's parallel study of *Der Erlkönig* (see Eerola, this issue), in which analytical self-reports of Schubert's emotions were validated, contested and ultimately refined through computational techniques. By focussing on the music's acoustic signals apart from the vocal text, Eerola clarifies the function played by stylistic context and listener appraisal in identifying emotions. A computational analysis also helps foreground the sheer complexity of *Erlkönig*, a Lied which increasingly tends towards confusion and deformation. The action and expression models are mixed, torn apart and atomised, their recontextualisation investing the emotional fragments with new identities. Given the enormous role of context dependency in aesthetic texts, what appears tender from a computational standpoint can sound frightening in the context of the work.

Blending Action and Expression

Ballads conventionally blend action and narrative, although *Erlkönig* does so in unusual ways. The Lied's narrator speaks in the first and last stanzas (as in Chopin's comparable Ballade No. 1 in G minor),[41] framing a central dialogue between the other three personas (the father, the child and the Erlking). Despite this symmetry, the opening verse is already subject to the expression model. Not only does the narrator answer his or her own question, but the four lines express distinct emotional profiles which rotate clockwise through affect space (Fig. 11). The opening line (Ex. 18) carries the $\hat{5}$–$\hat{6}$–$\hat{5}$ neighbour-note figure, which is

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 11 Clockwise pathway in Schubert, *Der Erlkönig*, verse 1



Schubert's archetype for Fear (F–G♭–F in the B♭ Sonata; F♯–G–F♯ in the *Unfinished* Symphony). The narrator's question – 'Wer reitet so spät durch Nacht und Wind?' ('Who rides so swiftly through night and wind?') – is aptly projected through ambiguous and unstable harmonies: locally, bars 15–19 reiterate $\mathrm{IV}^{6}_{4}-\mathrm{I}^{5}_{3}$ gestures on the D major tonality set up at bar 14; on the other hand, D's major mode maintains its status as the dominant of G minor, in which case the passage becomes $\mathrm{IV}^{6}_{4}-\mathrm{I}^{5}_{3}$ elaborations of a dominant pedal. The question is answered by three interlocking responses. 'Es ist der Vater mit seinem Kind' ('It is the father with his child'), with its open intervals, square cadential rhythm, and turn to the major, is Happy. 'Er hat den Knaben wohl in dem Arm' ('He has the child firmly in his arms') expresses Tenderness through its lullaby idiom – rocking dominant–tonic motions, with the 'sweet' E♭–A tritone implicitly enfolding the tonic in its arms. The lullaby darkens to lament in the last line, 'Er fasst ihn sicher, er hält ihn warm' ('He holds him safe, he keeps him warm'), with the modal switch to G minor, and the completion of the descent from $\hat{5}$ of G to $\hat{1}$. Overall, linear descent is one of the most important ways the responses assuage the provocation of Fear, proceeding from the top-G apex of bar 21. Given the 1 + 3 pattern of Goethe's verse – that is, a one-line question answered by three lines – it is fitting that Schubert's progression encompass the three distinct affective categories (Happy, Tender, Sad) within a single linear descent (reading $\hat{8}$ and $\hat{7}$ still within the background tonic of G minor, hence ignoring the fugitive

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 18 Schubert, *Der Erlkönig*, bars 14–32



© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 19 Schubert, *Der Erlkönig*: culminating threat-imminence trajectory



tonicisation of B♭). At the same time, answering Tenderness with Sadness (clockwise) rather than with Happiness (anticlockwise) gives the verse a dying fall instead of a happy ending.

At the opposite pole, the Lied concludes with a succinct threat-imminence trajectory (Ex. 19). Starting in the subdominant C minor, an ominous chromatic scale in octaves (ascent expressing approach) is arrested on a tonicised $\flat\hat{6}$, perfectly setting the words 'erreicht den Hof' ('reaches the courtyard', i.e. home) with tender lyricism. Time is frozen by the switch to recitative for 'in seinem Armen das Kind' ('in his arms the child'). Line length notwithstanding, as Geoffrey Hartman has noted, the poetry reaches a deceptive syntactic closure with the word 'Kind' and the image of the child safe in his father's arms, two syllables before Goethe's punchline ('war todt' ['was dead']), and Schubert's brutal cadence, extinguishes this hope.[42] Schubert's control of pacing is as exquisite as Goethe's: the sustained diminished seventh introducing doubt; the catastrophe all the more shocking because reported hushed, solo and on a tentative $\hat{5}$; and the piano cadence not so much expressing a violent reaction to the child's death as performing the action of murder with illocutionary force.

The emergence of the threat-imminence model as an encapsulated prototype only at the very end of the Lied is doubly reflexive. What arrives at Öhman's 'circa-strike' stage is nothing less than the trajectory itself, the model for retrospectively understanding the previous course of the Lied. Its arrival accordingly

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 20 Schubert, *Der Erlkönig*: opening alarm

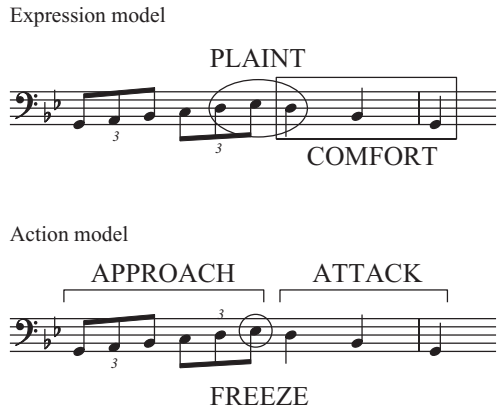


displaces the expression model which dominated the first part of the Lied. The arrival also flips round the entire trajectory of flight: initially, the galloping figures had suggested escape from the approaching threat; ultimately, they are appropriated by the threat itself, and what is depicted is a danger rushing towards the subject. (Either way, it is striking that the Erlking is an emanation of the uncanny landscape, which rushes along in pace with the horse.) Cognitive narrative theory attends to such perspectival mobility in the shuttling of subject and object positions.[43] Narratives invite readers to alternate between identifying with the actions of the agents internally and observing them from the outside. This is helpful in explaining the shift in *Erlkönig* from riding *with* the father and son *away from* the threat to viewing the galloping horse as the approaching threat itself (Schubert also includes the seductive Erlking's own perspective, so that the listener too is lured into pursuing the father and son).[44] Another source of this mobility in Schubert's Lied is the dynamics of Fear, as defined by Robinson (2005) after Joseph LeDoux (1998). According to Robinson, shocks engage a two-stage process in which a quick-and-dirty affective appraisal leads to a more leisurely and reflective cognitive reappraisal.[45] The Lied doesn't actually begin with a representation of a galloping horse but with a startling noise: the high activation of *forte* dynamics and fast triplet octaves in bar 1 (Ex. 20). We are able to make sense of this noise only across the following phrase, where the sound is disciplined formally and stylistically. In Öhman's terms, *Erlkönig* begins with startle potentiation: with a highly startling shock. This is in sharp contrast to the introduction of the *Unfinished* Symphony, which is frightening in ways more suited to the initial, 'orienting' module of the trajectory.[46]

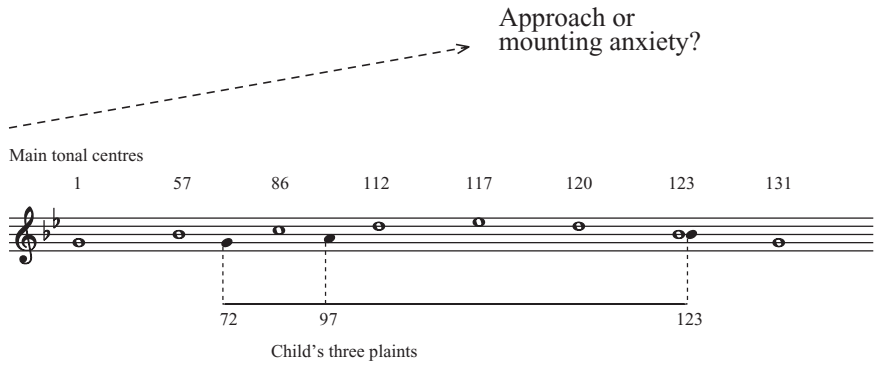
Once Schubert's opening figurations settle into focus, the interplay between expression and action models crystallises as an ambiguity within the *ostinato* gesture introduced at bars 2–3 (Ex. 21). From the perspective of the expression model, we hear the D–E♭–D turn figure as a plaintive response to the start of that bar and the opening alarm, comforted by the descending arpeggio. This tail will generate a series of comforting figures in association with the tonicising of B♭. By contrast, the action model interprets the scalar part of the bar not as an expression of something fearful, but as the approach of a threat. The E♭ crux is a freeze, rather than a plaint. The *ostinato*'s tail has the potential to be interpreted as an aggressive cadence.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 21 Expression *versus* action models



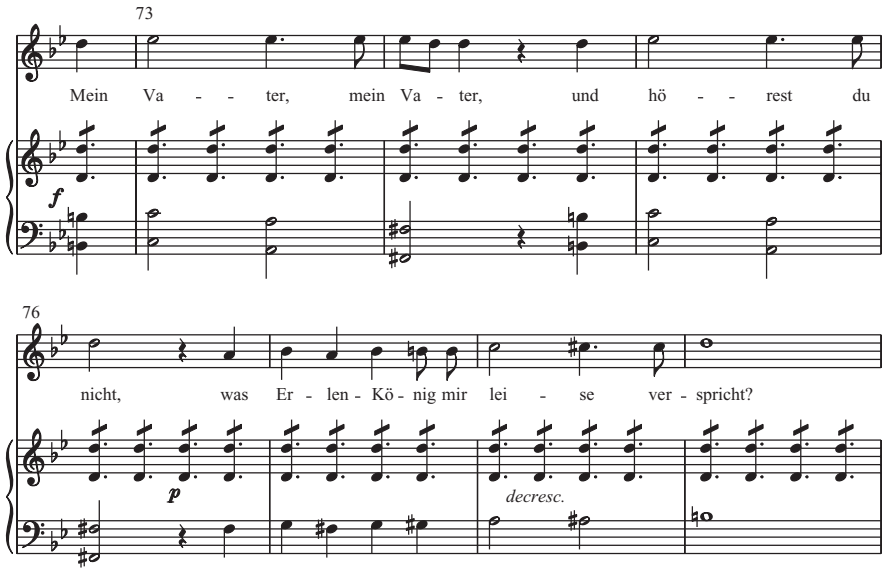
Ex. 22 Schubert, *Der Erlkönig*: tonal architecture, with child's three plaints



This ambiguity casts new light on *Erlkönig*'s remarkable isomorphism, as previously noted, of detail and structure:[47] the *ostinato*'s tonal contour – the scalar ascent to an E♭ crux, followed by a triadic return to the tonic (D–B♭–G) – is projected onto the Lied's tonal architecture (Ex. 22). As with the *ostinato*, the Lied's overarching linear progression can be heard in two ways: as a trace of either approaching threat (action) or rising panic (expression). The smoothness of this contour is highly deceptive. Read in the abstract, it discounts the plurality of personas, one of the Lied's most famous features, defined by contrasts of texture, register and idiom. It also overlooks the tonal ruptures which intervene between the steps of the linear progression. Of the four personas ventriloquised by the singer, that of the child is given the clearest identity: a $\hat{5}$–$\hat{6}$–$\hat{5}$ progression elaborating the figure of Fear introduced on the dominant at bars 16–17, but now in the tonic (Ex. 23). And the three statements made by the child persona outline a rising-third linear progression (G–A–B♭) which contradicts the more encompassing rising contour. That is, the G statement in bars 72–80 is embedded

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 23 Schubert, *Der Erlkönig*: child's first plaint



between the B♭ and C episodes; the A statement, between the C and C♯; and the B♭ ritornello marks the point of rupture where the contour turns back towards the tonic.

The child's cry is arguably the Lied's affective core; in its blend of anxiety, solicitude and lament, it projects a particularly complex flavour of Fear. One reason is that the $\hat{5}$–$\hat{6}$–$\hat{5}$ Fear figure absorbs the antique *pianto* topic of weeping or sighing associated with descending semitones.[48] Clear-cut distinctions are impractical in topic theory, but Monelle shows that *pianti*, at least in the late-Renaissance works of Marenzio and Monteverdi, were generally consonant and were associated with falling progressions befitting expressions of grief (p. 67). By contrast, the child's $\hat{5}$–$\hat{6}$–$\hat{5}$ Fear figure is maximally dissonant (the E♭ at bar 73 entering within a $\hat{4}$–$\hat{5}$–$\hat{6}$ cluster elaborated by a diminished seventh harmony) and contextualised within a rising progression, expressive of mounting anxiety: the semitone scale at bars 77–79 and the (unrealised) impetus for $\hat{5}$ to resolve *up* to the tonic. In short, the burden of the $\hat{5}$–$\hat{6}$–$\hat{5}$ figure is to draw out tense anticipations of upward cadential resolution. Finally, the child's intense arousal (*forte* and *allegro*) puts his emotion at the top end of the Sadness spectrum, where extreme distress may intersect with terror.

Owing to its uncanny emotional complexity, and to the fact that the plaint, at least in two of its three utterances, isn't permitted to reach its cadence (as I shall show), it is the figure which perhaps echoes longest in the listener's memory once the dust of the gallop has settled. This is ironic, since the tragedy of *Erlkönig* is that the father remains impassive before his son's pleas; his blunt 'Sei ruhig' ('Be calm') retorts are strangely inadequate to the urgent entreaties of 'Mein Vater, mein Vater, hörtest du nicht?' ('My father, my father, don't you hear?') In many

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

cultures (with musical instances from Mahler to the Kaluli),[49] ignoring a child's entreaty, normally for food, constitutes a foundational provocation. But in truth, the father does not hear his son. The reason is partly technical: his deafness is wired into the problematic of introducing lyricism into dynamic forms, indeed into the hybridity of lyrical ballads themselves. Were the music to truly attend to the lyrical appeal, it would grind to a halt (as wayfarers are often tempted to do in many of Schubert's Lieder, such as *Der Lindenbaum*), in disregard of the obligation to continue forwards towards the *telos*. I will argue that *Erlkönig* is driven by two kinds of Fear paradoxically folded into each other: the terror of a child and the deafness symptomatic of the father's panic (similar to P's fearful irresponsibility to detail in the *Unfinished* Symphony). In short, the Lied is expressive of 'Fear as deafness to Fear'.

Fear as Deafness to Fear

What I call the father's deafness is symptomatic of the skewed responsiveness of all the personas to one another. This general breakdown of the expression model is responsible for the Lied's emotional fragmentation which, in turn, makes *Erlkönig* so challenging to understand as a whole. In short, the father's deafness cascades down, level after level, to the listener's own hermeneutic deafness to aspects of the Lied, whose difficulty is attested by its reception history. For a long time, Reichardt's and particularly Loewe's less refractory settings were more popular than Schubert's arguably because they integrated the persona episodes more smoothly.[50]

The breakdown in emotional responsiveness is composed out as a deformation of the paradigm in bars 16–32. A typical (if particularly complex) example of Schubert's strophic variation technique, *Erlkönig* progressively elaborates the opening verse's melodic and tonal profile. Crucially, strophic variation is also applied to its affective trajectory. The opening verse seemed, in some respects, to be a model of smoothness in its clockwise circuit of affect space. Epitomising a well-functioning expression model, each line carries a fluent affective response. Yet the appearance is deceptive: one problem is that the music's 'dying fall' – declining in activation and valence from Happiness through Tenderness to Sadness – runs counter to the sense of the poetry. The three lines amount to a peculiarly listless response to the fearful question. Why, for instance, does the tonality darken from B♭ major to G minor when the poem describes the father's warm embrace of his child? It is relevant that the emotions are narrated at a distance, not actually enacted, as they will be in the next verse.

The opening verse's tonal model is expanded so as to occupy two and a half of Goethe's stanzas ('Sei ruhig', bar 80, which begins the next strophic variation, is line three of the poem's fourth verse). Tonally, this variation follows more or less the same circle-of-fifths tonal journey as the model: G–C–F–B♭, with a final shift back to G. Yet it is striking which elements Schubert fills in, expands or excludes (Ex. 24). The D triad is excluded (in the model, the fifths cycle begins

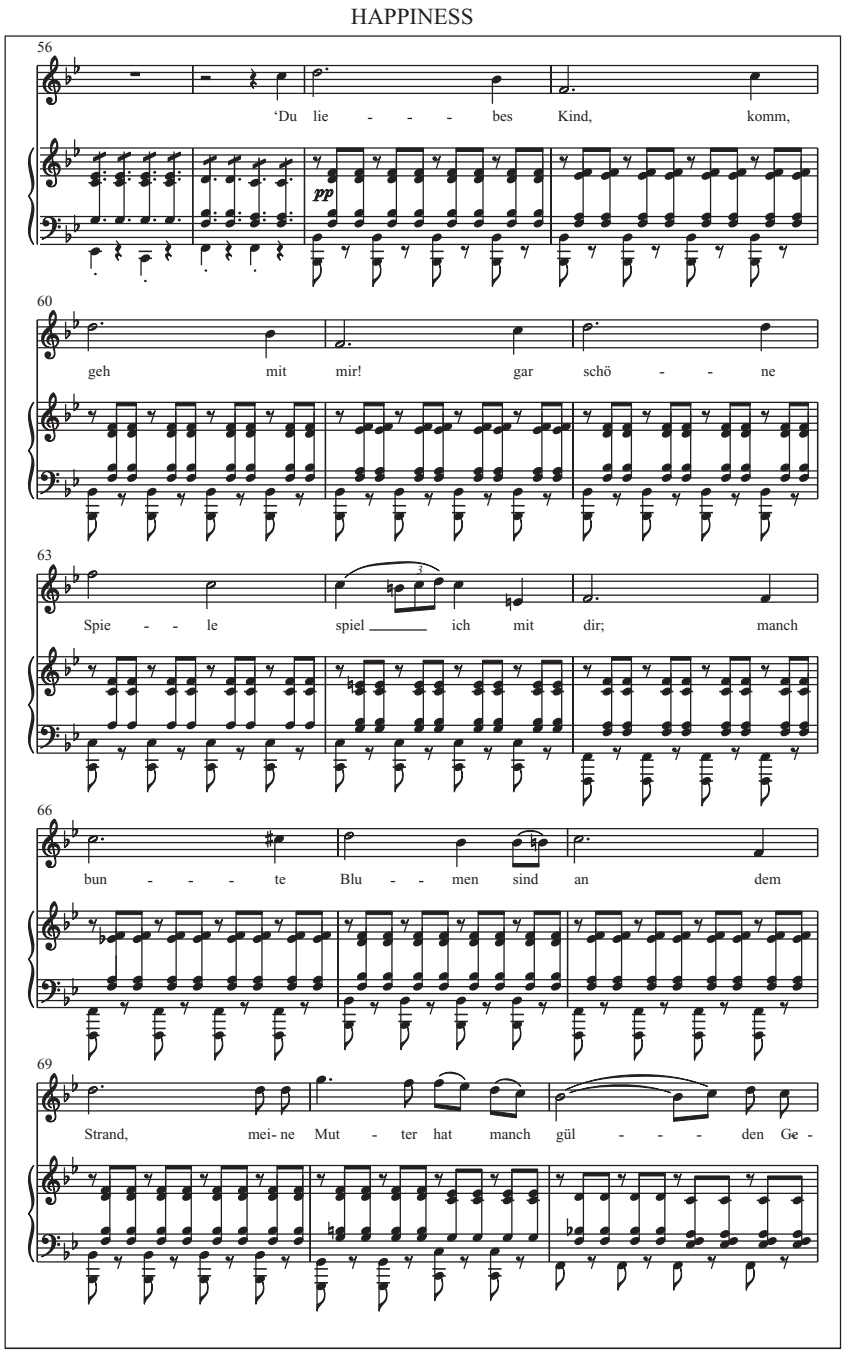
© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 24 Schubert, *Der Erlkönig*, verse 2, bars 33–78



© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 24 *Continued*



© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

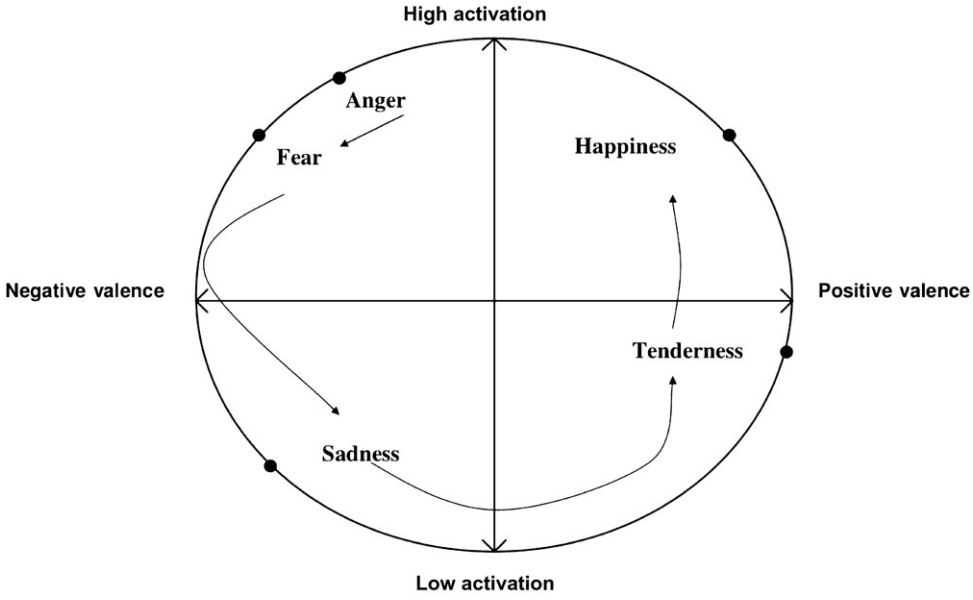
Ex. 24 *Continued*



a step earlier than G on D), but Schubert massively expands B♭. Where it had been a five-bar phrase, it now becomes a fourteen-bar miniature Lied for the Erlking. The expansion of B♭ is related to its prising itself away from the subsequent G minor unit. Despite the close tonal relationship between the last two keys in this cycle, B♭ and G minor, the rupture at bar 72 is one of the most dramatic in the Lied. Schubert maximises the contrast between the music of the two keys. The B♭ and G minor panels in the model (bars 24–28 and 28–32) were closely related in phrase length and melodic and harmonic profile. Now they could hardly be more different. The Erlking's B♭ Lied is the most tonally stable and formally self-enclosed episode in the entire ballad (starting and ending with perfect cadences, and with a clear beginning, middle and end). Conversely, the child's declamatory eight-bar phrase is highly dissonant (four bars of diminished seventh against a pedal on $\hat{5}$, followed by four bars of snaky semitone scales) and isolated from the surrounding music by tonal breaches (such as the B♭–B♮ slide at bar 72 and the shift to B minor at bar 79). More to the point is the emotional clash of which the material contrast is the vehicle. The B♭–G minor parallels in bars 24–33 confirmed an intrinsic affinity between Tenderness and Sadness, perhaps turning on a shared melancholy. The emotions in the B♭ and G minor panels in the variation are of a different order: the B♭ miniature Lied is too animated for Tenderness; the Sadness of the child's cry is expressed through his *pianto* appoggiaturas, but its increased urgency and dissonance nudge the

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 12 Anticlockwise pathway in Schubert, *Der Erlkönig*, verse 2



emotion anticlockwise in affect space towards Fear. The affective trajectory appears to have drifted apart from the tonal model.

The irony is that, on closer analysis, the affective trajectory in bars 33–80 is more natural. Whereas the variation expands the tonal structure of verse 1, it remains faithful to the emotional rhythm of one affect per line. These affects are now enacted by a proper conversation between father, son and Erlking; most important, the trajectory is reversed to an anticlockwise journey through affect space: Anger–Fear–Sadness–Tenderness (Fig. 12): the father's stern question, expressive of Anger, is set to the introductory music, retrospectively identifying him with the threat. His rising scale augments that of the *ostinato* figure, yet halting on C. The child's response, in Fear, continues the scale up to E♭, completing the 'plaint' middle unit of the expression model (albeit in C minor). I hear the next line, veering towards B♭ minor, as a modulation of Fear to Sadness, because of its descending contour. The father's Tender reassurance, confirming B♭ major, is his only affectionate utterance in the entire Lied.

The rupture at the climax of the variation hinges on what happens next: on the quality of the affect from bar 57. The Tenderness of the B♭ mini-Lied is more animated than at bar 24 – on the cusp of Happiness. Its more open and arpeggiated contour echoes the wide descending intervals of bars 22–23. It also follows in a chain of derivations from the questioning G–E♭ rising sixth of bars 45–46: the descending B♭ arpeggio at bars 58–59 (D–B♭–F) echoes and soothes

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

the descent across bars 47–48 from D♭ to F. By imitating and comforting the child, the Erlking – assuming the voice of a mother ('meine Mutter hat manch' gülten Gewand' ['my mother has some golden robes']) – mimics the swooping, descending contours characteristic of 'motherese', the child-directed speech caregivers instinctively employ to soothe infants. Schubert simulates motherese vocalisations in some of his other lullabies, as Daniel Leech-Wilkinson has noted.[51] The Erlking's imitation of the boy's contours could be heard as a process of affect attunement, comforting him by synchronising with his affective gestures. The boy's affect is not simply matched; it is transformed. As in Stern's anecdote of the distressed child, attunement is a prerequisite for taking the child from one emotional state to another. Moreover, parents do not just comfort their children: they also tell them what to do. The Erlking's B♭ 'Lied', the most 'grown-up' Lied in the piece, serves as an example to be imitated. It is an example which the child vehemently rejects.

The attunement of the affective trajectory serves only to sharpen its collision with the G minor plaint of bar 72. The clash is perhaps the Lied's central crisis, more drastic than the child's death at bar 131, or its discovery at the end of the Lied. Schubert, through breathtaking sleight of hand, positions motherese – the prototype of human comfort – into an object of Fear, inducing the child's terrified response. The strategy perfectly demonstrates the partial context dependency, rather than the essentialism, of emotion within art music: the emotional character of material can depend on its position and function. Consider how Schubert engineers this affective non sequitur. By heightening the Tender lullaby into motherese and displacing Sadness with Fear, Schubert takes two adjacent emotions (Tender and Sad) and sets them at an angle approaching 180 degrees in affect space. The perpendicular trajectory of Fear–Tenderness seems to be sanctioned only in one direction, as when we reassure a frightened child. Reversing it to Tenderness–Fear runs against nature.

Equally unnatural is the father's brusque response at bar 80, expressive of Anger (Ex. 25). An adequate reply to the child's distress would be a calming linear descent from $\hat{5}$ to $\hat{1}$; this happens at bar 79, but in the wrong key, and so the shift to B minor sets up the father's dismissive cadence: the G minor resolution is deferred to the child's death at bar 131. Instead, the father presses ahead with the next fifth cycle, F♯–B–E–A–D–G–C, the goal of which is the second Erlking Lied in C major. The pattern is repeated: child's plaint in A minor, denied by father's cadence in C♯ minor (after a linear descent from $\hat{5}$ of A), leading via D minor to the Erlking's third Lied in E♭ major.

Taking this pile-up of three emotions at bars 72–81 as central, the nature of Schubert's strophic-variation process changes in the second half of the Lied. The tonal model is deformed out of recognition: at bars 80–86, the fifth cycle is expanded from five steps (D–G–C–F–B♭) to seven (F♯–B–E–A–D–G–C); thereafter it is abolished, with the father's next episode (bars 105–112) shifting from C♯ to D minor. Similarly, the affective trajectory is no longer directed towards a comfort module in B♭: the Erlking's C major Lied tempts the child not with

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 25 Schubert, *Der Erlkönig*: father's brusque response



maternal love, but with the pleasures of the dance. Mimicking now not the triadic tail of the *ostinato* but the G–E♭ rising sixth of its head (with E♮), presented in a sunny C major with tripping dactyls, the Erlking nudges the Lied from the orbit of the expression model to that of the action model. From the perspective of the threat-imminence trajectory, the Erlking's E♭ Lied functions as a freeze, despite its comforting lullaby melody (Ex. 26). Response (expression) is eclipsed by freeze (action) primarily because the E♭ major statement is so brief and tonally precarious, a Neapolitan turn around D minor hedged on both sides by strong perfect cadences. Also, the E♭ Lied follows immediately after the resumption of the *ostinato* gestalt for piano alone, whereas the B♭ Lied had answered plaintive vocal utterances. A tiny yet critical detail underpins this shift from expression to action model: the reversal of the vocal cadences from rising fourths to falling fifths. All the cadences in the vocal part before bar 111 rise; after that point, they all fall. The inversion brings out the cadential (rather than the comforting) profile of the *ostinato*'s tail as the termination of movement. The disappearance of all three personas and the return of narrative in the Lied's final variation (bars 131–148) underscore the death of the expression model.

It is remarkable how the Erlking's three Lieder parse through the *ostinato*'s three modules concentrically: from absent mother (the triadic lullaby), through present father (the kinetic scales), finally homing in on the child (the $\hat{5}$–$\hat{6}$–$\hat{5}$ plaint). The text of this melody ('Ich liebe dich, mich reizt deine schöne Gestalt' ['I love you, your beautiful form touches me']), a tune which was important enough for Schubert to reuse it as the second subject of his *Unfinished*

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Ex. 26 Schubert, *Der Erlkönig*: Erlking's E♭ Lied



Symphony, has been taken as a disturbing hermeneutic window on Schubert's possibly abusive relationship with his own father.[52] The view from literary studies is that Goethe is simply referencing the myth that empty spirits such as the Erlking envy humans' corporeal shapes, their 'human form divine' (Hartman 1975, p. 410). Thus Schubert's Erlking, lacking an identity of his own, is parasitic successively on the shapes of mother, father and child. The Erlking's shape shifting led the psychoanalyst James Herzog to coin the term 'the Erlkönig syndrome' to account for the ways in which young boys who are deprived of their father's formative influence become victims of their undeciphered fears.[53] With a conceptual leap, the Erlkönig syndrome also aptly describes the Lied's own emotional plasticity. The Lied, like most of Schubert's, captures its prevailing affect in its opening textural figures. Fidelity to this texture perpetuates the emotion; while the Lied's vicissitudes do not entirely change this emotion, they actively mould and interpret it.

The thrust of Fear in *Erlkönig* moves in two directions. At the highest level, we feel Fear in our cognitive panic, trying – and failing – to grasp an overwhelming mass of contrasting impressions. This panic, Heidegger's 'bewilderment of frightened people', is sublime, like our experience of the *Unfinished* Symphony. The other direction is towards deceptive lyrical islands in the stream, afforded in the Lied by the Erlking's three interventions and in the Symphony by its second group. Formal and formative (in the Erlking's parental sense), these reifications interpret the emotion. The fascination of *Erlkönig* is that the role of words and personas allows us to indulge the conceit that the music is self-interpreting,

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

ventriloquising the listener's own hermeneutic activity. Cutting through this conceit, we are left with two questions. Is the experience of being overwhelmed general to all emotions, or is it specific to Fear? Does interpretation fully construct an emotion, or only finesse it?

Emotives: an Answer to Eerola

Someone asks you, 'Are you afraid?' You may not have been aware of your precise feelings before. But in replying, 'Yes, I am', a low-level anxiety mutates into real and present Fear. In the process of interrogating your feelings and putting them into words, you bring them to light. William Reddy calls such first-person, present-tense emotional utterances 'emotives'. They partake of the performative, illocutionary force of language acts, with the crucial difference that J. L. Austin's language acts do things in the world (e.g. 'I do', or 'I accept'),[54] whereas emotives are directed inwards, their referent being individual emotional experience: '[e]motives are themselves instruments for directly changing, building, hiding, intensifying emotions' (Reddy 2001, p. 105). What emotives say about the fugitive, protean nature of emotion is captured by this passage from a biography of Bertrand Russell:

> It was late before the two guests left and Russell was alone with Lady Ottoline. They sat talking over the fire until four in the morning. Russell, recording the event a few days later, wrote, 'I did not know I loved you till I heard myself telling you so – for one instant I thought, "Good God, what have I said" and then I knew it was the truth'. (Cited in Reddy 2001, pp. 102–3)

Pitched between psychology and anthropology, Reddy's *Navigation of Feeling* uses emotives to navigate the history of emotion in the early modern era. Of course, earlier philosophers, such as Benedetto Croce and R. G. Collingwood, had proposed that language, bodily gesture and art itself bring emotion to consciousness through acts of expression,[55] a theory that can ultimately be traced to Hegel. But by viewing historical culture as an extension of the psychological process of emotional self-regulation, Reddy is able to sidestep rigidly Cartesian oppositions between mind and body, or (cultural) constructionism and (biological) essentialism. Emotives are particularly revealing for Romantic music. After the sentimentalist era of the Classical style, when emotion was conventionalised into a public language,[56] it went underground as an agent of inwardness, or *Innerlichkeit*. From a political standpoint, after the revolutionary Terror of 1792–3, which Reddy explains as the climax of the sentimentalist project of placing emotional common sense at centre stage in the national arena, emotion's claims on public life were discredited; emotion was driven to the margins, where it has stayed ever since. Broadly a beneficiary of this inward turn through its very existence, Schubert's emotionalism simultaneously reflects the emasculation of emotions in the fragmentation of his language. The individual emotions are emancipated from their scenarios and models and become equally dependent on

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

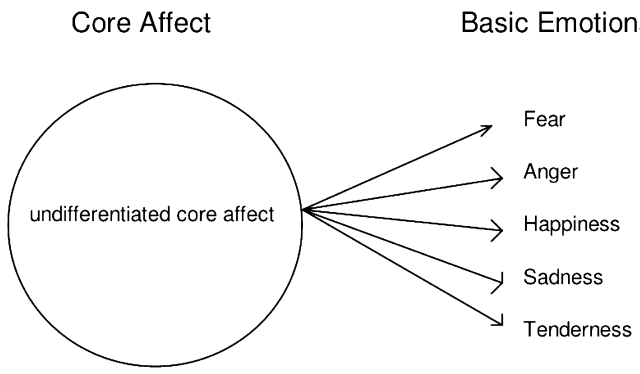
the context of the work and on acts of hermeneutic interpretation. It is likely that the fragmentation of the threat-imminence model we have seen in *Erlkönig* is possible only because so much of the structural load is borne by the poetic text. Hence we can infer a codependence in the history of Romantic music between emotion's inward turn, its fragmentation and the rise of poetic programmes.

Context dependency and interpretative appraisal – the two sides of the Schubertian emotive – are illuminated *in absentia* by Eerola's analysis of *Erlkönig* (this issue). Eerola's discovery that his film-soundtrack model can pick up the Lied's Fear and Anger neatly confirms that, up to a point, emotional recognition transcends cultural and historical difference. Techniques gauged to the music of modern cinema can be used to recognise similar emotions expressed by a Lied written nearly two centuries earlier. The very coarseness of this data, however – the model's lower sensitivity towards the Lied's other emotions – validates the role of stylistic knowledge in guiding interpretation. Eerola's piano-performance model tuned into the Lied genre with greater discrimination for the Lied's emotional range; its parametric method – identifying the shifting interplay of all five emotions within each section – suggests that the emotions are not monoliths, but complex compounds. This had also been indicated by the soundtrack model's surprising discovery that the highest proportion of Anger lay in the Tender and Happy segments (i.e. where a listener hears Tenderness, the model hears Anger). Eerola attributes that to the recurring low-register octave quavers, which approximate the low-frequency energy characteristic of Angry film music. He speculates that the listener disregards the Anger of the texture because he or she is trained to pay more attention to the vocal line.

Schubert's emotions, then, are compound, and the listener's attention is selective. Summing up the music's multiple parametric cues with an emotional label can be just as emotively performative as characterising the overall tenor of one's emotional situation in everyday life. Both entail, in Reddy's terms, acts of 'translation', since the multiplicity of codes exceeds the capacity of attention. In everyday life, translation 'requires coordinating many simultaneous translation tasks – involving linguistic, visual, bodily, and social codes – in a single stream of strategic expression and behaviour' (Reddy 2001, p. 93). In the musical experience of a Lied's affect, translation operates not only between words and tones, but also within the musical realm across the many simultaneous acoustic cues. As Eerola demonstrates, dynamics and articulation may express one emotion, tempo and mode another, with the listener's sense of context and choice of attention determining the overall affect. The listener must also be adept at translating between expressions of a single affect in different parameters, in order to understand, say, staccato articulation and a low sound level as analogous cues for Fear. Cross-cue translation parallels what Juslin and Timmers term (after the early twentieth-century psychologist Egon Brunswik) 'vicarious functioning', as when 'different cues [in ecological perception] ... substitute for one another' (Juslin and Timmers 2010, p. 474). At the discursive level, translation entails the recruitment of multiple disciplines (music theory, aesthetics, psychology and

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 13 Model 1



computational methods, among others) in the service of what I term a 'holistic analysis' of musical emotion.

Finally, to answer my two questions. Reddy's theory suggests that the experience of being overwhelmed is indeed general to all emotions, and not just Fear. In some ways, his theory is a striking update of the Kantian sublime, in which reason is overwhelmed by superabundance. For Reddy, emotion is a multiplicity of 'thought material' which 'exceeds attention's capacity to translate it into action or into talk in a short time horizon' (2001, p. 94). One may be equally defeated by the exigencies of joy, love, Fear, or Anger. The position squares with my notion of the sublime as a constellation subsuming all the basic emotions. Yet does this not clash with the theory of discrete emotional categories? An interesting take on this question is afforded by Alan Blum's essay on the phenomenology of panic and fear, emotions which he believes are virtually synonymous with modern life. According to Blum, panic

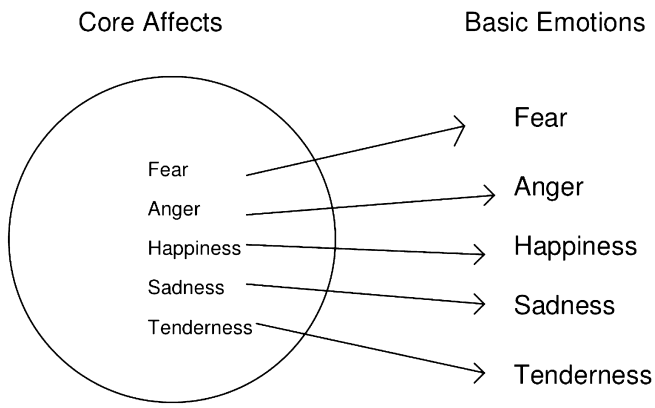
> expresses in distorted form that phase of collective life in which we are consumed by the question of existence, and it is the primitivity of this question that compels our surrender to its immediacy and urgency in a way that can only appear uncritical. The inflation of the present as a moment of emergency invests the now with its continuous sense of precariousness in a way that can only heighten our experience of the fragility of everyday life: the very terms of collective existence are dramatized as a spectacle in which we can envision the imminent loss of what we have and are. (Blum 1996, p. 694)

Blum notes panic's 'structural affinity' with collective behaviours of celebration. Nevertheless, he concludes that, despite their surface similarities, 'panic is desperate and celebration is ecstatic'. Indeed, he defines panic as a kind of 'distorted ecstasy' (*ibid.*, p. 695). In our terms, we can be overwhelmed equally by extreme Fear and Happiness, while recognising them as discrete emotions.

This takes us to my second question. 'Getting constructionism right', to quote Griffiths (1998, p. 143), I propose that the role of interpretation is constrained

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Fig. 14 Model 2



by fundamental differences of musical emotion. Model 1, which shows the classic view of a homogenous core affect being refracted into discrete emotions only at the level of expression or contextualisation (Fig. 13), is to be rejected.

Model 2 is to be preferred: five or more discrete emotions at a deep level being nuanced at a surface level (Fig. 14).

Musical emotions, then, are finessed, not constructed.

NOTES

1. See Spitzer (2004), pp. 20–1.
2. This is not to say that third-cycles cannot be mediated by passing whole tones, as in the beginning of the Sanctus from Schubert's Mass in E♭ (see Taruskin 2005, pp. 103–5). My point concerns harmonies as categories.
3. For histories of emotion in Western culture, including passions and affections, see Dixon (2003); Gross (2006); and James (1997).
4. See Spitzer (2009), pp. 156–61.
5. For Kant in the history of emotion, see Redding (1999), particularly pp. 73–87.
6. For more on how Juslin made use of Russell's model, see Juslin and Timmers (2010), p. 463.
7. The number and membership of the exclusive club of basic emotions doesn't concern us here (for instance, Disgust, which Darwin thought was basic, seems to play little part in musical experience). For a recent defence of basic or discrete emotion theory (DET), see Izard (2007).
8. See Spitzer (2009), pp. 158–61.
9. See Robinson (2005), pp. 75–9.
10. See Juslin and Laukka (2003), p. 789, for a discussion of 'mild fear' and 'panic fear'.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

11. It is certainly true that the action tendencies literally induced by music are limited to dancing, singing, smiling, laughing, weeping and the like. But the range of behaviours symbolically enacted within the musical work is much wider. For a pessimistic reading, see Scherer and Zentner: 'It is also difficult to see which modes of action readiness or action tendencies that, according to Frijda (1986), define the quality of emotions, can be evoked by music. The exceptions are action tendencies like singing or dancing that are quite regularly provoked by certain types of music'; Scherer and Zentner (2001), p. 384.
12. See Sawyer (2005), p. 52.
13. Conceding that '[b]y definition, concepts of ecology and autonomy are fundamentally incompatible' (Clarke 2005, p. 132), Clarke proceeds to interrelate them (Ch. 5), culminating with a Gibsonian hearing of the first movement of Beethoven's Op. 132 (Ch. 6).
14. On signifiers, see Huron (2006), p. 323; for a discussion of their significance in film scores, see Winters (2008).
15. See Huron (2006), pp. 239–68.
16. See Monelle (2000), p. 47.
17. See Taruskin (2005), p. 110.
18. See Eerola and Vuoskoski (2011) for a systematic investigation into the relative merits of two versus three dimensions.
19. See Kramer (1998, pp. 28–38) for an encapsulated survey of these issues, focussing on Schubert's capacity to move in between the 'rationalised' and 'unrationalised' worlds (p. 31) of Viennese society.
20. According to Oster's commentary on *Free Composition* (Schenker 1979, p. 140).
21. In a forthcoming article (Spitzer 2012) I relate affect space in Schubert's *Trockne Blumen* to a similar axial harmonic progression. I show that the first half of the song rises through the third-cycle E–G–B, whilst the second falls through E–C♯–A♯. Given that the latter, descending cycle features an even greater *rise* in affective and tonal tension, I infer that it is problematic to draw direct analogies between melodic and tonal contour, and levels of emotional activation or relaxation.
22. See Horton (2008, p. 111) for the 'tonic blindness' of the Riemannian *Tonnetz* model. It is counter-intuitive to have axial harmony without a tonal centre.
23. See Cohn (1999), pp. 222–4.
24. *Im Walde* (D708), *Wilkommen und Abschied* (D767), and *Auf dem Bruck* (D853), later 'gallop' Lieder comparable with *Der Erlkönig*, are all in the major mode.
25. I use this notion of a harmony 'coming into itself' following Adorno's Hegelian analysis of the opening of Beethoven's 'Waldstein' Sonata. See Spitzer (2006), pp. 51–2.
26. See Goldman (2006), pp. 286–7: 'In the opening sequence of *Jaws*, viewers who know that a killer shark is nearby have different emotions than the character swimming in the water, who is happy and carefree in her ignorance. ... A hypothetical observer of the *Jaws* scenario knows a shark is around and therefore feels fear *for* the swimmer; he doesn't feel *her* fear, because she doesn't have any'.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

27. For a review of research into the physiological responses involved in emotions, see Kreibig (2010).

28. The units themselves are not important, since different participants have different baseline sweat levels; what matters are the relative changes in these levels. The recording is from Daniel Barenboim's set of the complete Schubert Symphonies with the Berlin Philharmonic, Essential Classics (2003), ASIN B00009PBXE.

29. According to results of a questionnaire conducted with the listeners, Subject 3's 'preferred styles' were 'rock, pop, classical, and world'. On a scale of 1–4 (with 1 being the highest), Subject 3 scored 3 for Engagement with the piece, 2 for Liking and 4 for Familiarity. I scored 1 for all these parameters, with Subjects 1 and 2 scoring mostly 4s and 3s.

30. See Monelle (2006), pp. 166–9. This is not a literal quotation of a trumpet call, but a signal-like contour.

31. See Tsai, Wang, Wang, Shau, Hsiao and Auhagen (2010).

32. See Clarke's (2005, pp. 77–80) discussion of the two orchestral crescendos in *Wozzeck*.

33. See Russell (1991), p. 39.

34. See Benjamin (1998), p. 34.

35. See Lakoff (1987), pp. 74–6; and Spitzer (2004), pp. 20–1.

36. Panksepp, a neuroscientist, defines 'separation anxiety' as the severing of social bonding: '[t]o be alone and lonely, to be without nurturance or a consistent source of erotic gratification, are among the worst and most commonplace emotional pains humans must endure'; Panksepp (2005), p. 263.

37. See Spitzer (2006), pp. 5–6.

38. Kramer (2009) explores the 'recalled sublime' through the work of Alain Badiou in Haydn's *Creation*.

39. See Monelle (2000), p. 49.

40. *Ibid.*, pp. 47–9.

41. See Taruskin (2005), p. 372.

42. See Hartman (1975), p. 405.

43. See Goldman (2006), p. 287; and Nussbaum (2007), p. 232.

44. Gibbs notes that Goethe refers to the rider's speed only at the end of the poem ('Er reitet geschwind' ['He rides swiftly']), which early commentators interpreted as a leisurely canter, and that it was Schubert's decision to project a frantic quality on the start of the Lied; Gibbs (1995), p. 122.

45. See Robinson (2005), pp. 75–9.

46. And this is why Robinson's theory of startle (1995), which she generalises to emotion, has a limited scope for analysis of Fear. It may work for the start of *Erlkönig*, where startle is potentiated, but it doesn't explain the Fear in the primary group of the *Unfinished* Symphony, which inhibits startle. Another point of reference is Juslin and Laukka's finding that Fear is 'most commonly associated with

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

high intensity in vocal expression, albeit low intensity (sound level) in music performance'; Juslin and Laukka (2003), p. 789.

47. See Stein (1989), p. 158.

48. See Monelle (2000), pp. 66–73.

49. See Feld's classic study (1982). In the Kaluli myth 'The Boy Who Became a Muni Bird', '[t]he boy begs his sister for food, using a specific verbal formula and intonation aimed at making the sister feel sorry for him. She refuses by placing the thoughts of others before him. In the three successive appeals, she worsens the denial by repeated refusal' (p. 25). According to Feld, 'to deny food to a child is unthinkable' (p. 27). A direct Western analogue, particularly pertinent to *Erlkönig*, is Mahler's song *Das erdische Leben*, from *Des Knaben Wunderhorn*, in which a mother ignores her child's repeated pleas for bread, leading to his death.

50. See Gibbs (1995).

51. See Leech-Wilkinson's (2006) analysis of Schubert's *Schlaflied* (D. 527), pp. 240–9.

52. See Gibbs (1995), p. 132: 'Commonly repressed childhood fears and parental conflicts enacted in Goethe's poem are forcefully re-enacted in Schubert's music'. Gibbs also points out (*ibid.*, p. 133) the homoerotic aspects of Goethe's decision to transform the seduction of a man by a woman (the original Danish folk tale) to that of a young boy by a man: 'It is essential that the Erlking be a sexless spirit, lest he be a spectre of pederasty'.

53. See Herzog (1980). Compare with Kramer's interpretation (1984, p. 149): 'a latent impulse in the song is to lament the failure of paternal power. … The song may even suggest that the loss of identification with the father is a death-blow to the self'.

54. See Austin (1975).

55. See Robinson (2005), pp. 441–2.

56. See Spitzer (2011) for a discussion of the sentimentalist aesthetics of Adam Smith, including his Humean theory of sympathy, in relation to emotion in Mozart.

REFERENCES

Austin, John Langshaw, [1962] 1975: *How to Do Things with Words* (Cambridge, MA: Harvard University Press).

Benjamin, Walter, 1998: *The Origin of German Tragic Drama*, trans. John Osborne (London: Verso).

Blood, Anne, and Zatorre, Robert, 2001: 'Intensely Pleasurable Responses to Music Correlate with Activity in Brain Regions Implicated in Rewards and Emotion', *Proceedings of the National Academy of Sciences of the United States of America*, 98/xx, pp. 11818–23.

Blum, Alan, 1996: 'Panic and Fear: on the Phenomenology of Desperation', *Sociological Quarterly*, 37/iv, pp. 673–98.

Campeau, Serge, 1995: 'Prepulse Inhibition of the Acoustic Startle Reflex using Visual and Auditory Prepulses: Disruption by Apomorphine', *Psychopharmacology*, 117, pp. 267–74.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Clarke, Eric, 2005: *Ways of Listening* (Oxford and New York: Oxford University Press).
Cohn, Richard L., 1999: 'As Wonderful as Star Clusters: Instruments for Gazing at Tonality in Schubert', *19th-Century Music*, 22/iii, pp. 213–22.
Dahlhaus, Carl, 1989: *Nineteenth-Century Music*, trans. J. Bradford Robinson (Berkeley and Los Angeles, CA: University of California Press).
Dixon, Thomas, 2003: *From Passions to Emotions: the Creation of a Secular Psychological Category* (Cambridge: Cambridge University Press).
Eerola, Tuomas, and Vuoskoski, Jonna, 2011: 'A Comparison of Discrete and Dimensional Models of Emotion in Music', *Psychology of Music*.
Feld, Steven, 1982: *Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli Expression* (Philadelphia, PA: University of Pennsylvania Press).
Frijda, Nico, 1986: *The Emotions* (Cambridge: Cambridge University Press).
Gibbs, Christopher, 1995: ' "Komm, geh' mit mir": Schubert's Uncanny "Erlkönig" ', *19th-Century Music*, 19/ii, pp. 115–35.
Gibson, James, [1979] 1986: *The Ecological Approach to Visual Perception* (London: Psychology Press).
Goldman, Alvin, 2006: *Simulating Minds: the Philosophy, Psychology, and Neuroscience of Mindreading* (Oxford and New York: Oxford University Press).
Griffiths, Paul, 1998: *What Emotions Really Are* (Chicago: University of Chicago Press).
Gross, Daniel, 2006: *The Secret History of Emotion: from Aristotle's* Rhetoric *to Modern Brain Science* (Chicago: University of Chicago Press).
Hartman, Geoffrey, 1975: 'Wordsworth and Goethe in Literary History', *New Literary History*, 6/ii, pp. 393–413.
Heidegger, Martin, 2000: *Being and Time*, trans. John Macquarrie and Edward Robinson (Oxford: Blackwell).
Heine, Heinrich, 2006: *Sämtliche Werke* (Mannheim: Artemis and Winkler).
Hepokoski, James, and Darcy, Warren, 2006: *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata* (Oxford and New York: Oxford University Press).
Herzog, James, 1980: 'Sleep Disturbance and Father Hunger in 18- to 28-Month-Old Boys: the Erlkönig Syndrome', *Psychoanalytic Study of the Child*, 34, pp. 219–33.
Horton, Julian, 2008: *Bruckner's Symphonies: Analysis, Reception and Cultural Politics* (Cambridge: Cambridge University Press).
Huron, David, 2006: *Sweet Anticipation: Music and the Psychology of Expectation* (Cambridge, MA: MIT Press).
Izard, Carol, 2007: 'Basic Emotions, Natural Kinds, Emotion Schemas, and a New Paradigm', *Perspectives on Psychological Science*, 2, pp. 260–80.
Izard, Carol, and Ackerman, Brian, 2004: 'Motivational, Organizational, and Regulatory Functions of Discrete Emotions', in Michael Lewis and Jeanette

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

M. Haviland-Jones (eds), *Handbook of Emotions* (London: Guilford Press), pp. 253–64.

James, Susan, 1997: *Passion and Action: the Emotions in Seventeenth-Century Philosophy* (Oxford: Clarendon Press).

Juslin, Patrik N., and Laukka, Petri, 2003: 'Communication of Emotions in Vocal Expression and Music Performance: Different Channels, Same Code?' *Psychological Bulletin*, 129/v, pp. 770–814.

Juslin, Patrik N., and Sloboda, John A., 2001: 'Psychological Perspectives on Music and Emotion', in Patrik N. Juslin and John A. Sloboda (eds), *Music and Emotion: Theory and Research* (Oxford and New York: Oxford University Press), pp. 71–104.

Juslin, Patrik N., and Timmers, Renee, 2010: 'Expression and Communication of Emotion in Music Performance', in Patrik Juslin and John Sloboda (eds), *Handbook of Music and Emotion: Theory, Research, Applications* (Oxford and New York: Oxford University Press), pp. 453–89.

Kant, Immanuel, [1790] 1989: *The Critique of Judgement*, trans. James Creed Meredith (Oxford: Clarendon Press).

Kramer, Lawrence, 1984: *Music and Poetry: the Nineteenth Century and After* (Berkeley and Los Angeles, CA: University of California Press).

_____, 1998: *Franz Schubert: Sexuality, Subjectivity, Song* (Cambridge: Cambridge University Press).

_____, 2009: 'Recalling the Sublime: the Logic of Creation in Haydn's *Creation*', *Eighteenth Century Music*, 6/i, pp. 41–57.

Kreibig, Sylvia D., 2010: 'Autonomic Nervous System Activity in Emotion: a Review', *Biological Psychology*, 84, pp. 394–421.

Kurth, Richard, 1999: 'On the Subject of Schubert's "Unfinished" Symphony: "Was bedeutet das Bewegung?" ', *19th-Century Music*, 23/i, pp. 3–32.

Lakoff, George, 1987: *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind* (Chicago: Chicago University Press).

LeDoux, Joseph, 1998: *The Emotional Brain* (New York: Phoenix).

Leech-Wilkinson, 2006: 'Portamento and Musical Meaning', *Journal of Musicological Research*, 25, pp. 233–61.

Levy, Janet, 1982: 'Texture as a Sign in Classic and Early Romantic Music', *Journal of the American Musicological Society*, 35/iii, pp. 482–531.

Margulis, Elizabeth, 2005: 'A Model of Melodic Expectation', *Music Perception*, 22/iv, pp. 663–714.

_____, 2007: 'Surprise and Listening Ahead: Analytic Engagements with Musical Tendencies', *Music Theory Spectrum*, 29/ii, pp. 197–217.

McClary, Susan, 1994: 'Constructions of Subjectivity in Schubert's Music', in Philip Brett, Elizabeth Wood, and Gary Thomas (eds), *Queering the Pitch: the New Gay and Lesbian Musicology* (New York: Routledge), pp. 205–33.

Meyer, Leonard B., 1956: *Emotion and Meaning in Music* (Chicago: University of Chicago Press).

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

_____, 2001: 'Music and Emotion: Distinctions and Uncertainties', in Patrik N. Juslin and John A. Sloboda (eds), *Music and Emotion: Theory and Research* (Oxford and New York: Oxford University Press), pp. 341–60.

Monelle, Raymond, 2000: *The Sense of Music: Semiotic Essays* (Princeton, NJ: Princeton University Press).

_____, 2006: *The Musical Topic: Hunt, Military, and Pastoral* (Bloomington, IN: Indiana University Press).

Nussbaum, Charles, 2007: *The Musical Representation: Meaning, Ontology, and Emotion* (Cambridge, MA: MIT Press).

Öhman, Arne, and Wiens, Stefan, 2003: 'On the Automaticity of Autonomic Responses in Emotion: an Evolutionary Perspective', in Richard J. Davidson, Klaus R. Scherer and H. Hill Goldsmith (eds), *Handbook of Affective Sciences* (Oxford and New York: Oxford University Press), pp. 256–75.

Paddison, Max, 1997: *Adorno's Aesthetics of Music* (Cambridge: Cambridge University Press.

_____ 2009: 'Reading History in the Ruins of Nature: Images of Truth, Mortality and Reconciliation in Adorno's Schubert Interpretation', in Mário Vieira de Carvalho (ed.), *Expression, Truth and Authenticity: on Adorno's Theory of Music and Musical Performance* (Lisbon: Edições Colibri), pp. 41–58.

Panksepp, Jaak, 2005: *Affective Neuroscience: the Foundations of Human and Animal Emotions* (Oxford and New York: Oxford University Press, 2005).

Redding, Paul, 1999: *The Logic of Affect* (Ithaca, NY: Cornell University Press).

Reddy, William, 2001: *The Navigation of Feeling: a Framework for the History of Emotions* (Cambridge: Cambridge University Press).

Resnicow, Joel E.; Salovey, Peter; and Repp, Bruno H., 2004: 'Is Recognition of Emotion in Music Performance an Aspect of Emotional Intelligence?' *Music Perception*, 22/i, pp. 145–58.

Robinson, Jenefer, 1995: 'Startle', *Journal of Philosophy*, 92/ii, pp. 53–74.

_____, 2005: *Deeper than Reason: Emotion and Its Role in Literature, Music, and Art* (Oxford and New York: Oxford University Press).

Rosenblum, Lawrence; Wuestefeld, Paige; and Saldaña, Helena, 1993: 'Auditory Looming Perception: Influences on Anticipatory Judgments', *Perception*, 22, pp. 1467–82.

Russell, James A., 1980: 'A Circumplex Model of Affect', *Journal of Personality and Social Psychology*, 39/vi, pp. 1161–78.

_____, 1991: 'In Defense of a Prototype Approach to Emotion Concepts', *Journal of Personality and Social Psychology*, 60/i, pp. 37–47.

Sawyer, Keith, 2005: 'Music and Conversation', in Dorothy Miell, Raymond MacDonald and David Hargreaves (eds), *Musical Communication* (Oxford and New York: Oxford University Press), pp. 45–60.

Schenker, Heinrich, [1935] 1979: *Free Composition [Der freie Satz]*, trans. and ed. Ernst Oster (London: Longman).

Scherer, Klaus R., and Ellsworth, Phoebe C., 2009: 'Appraisal Theories', in David Sander and Klaus R. Scherer (eds), *The Oxford Companion to*

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

Emotion and the Affective Sciences (Oxford: Oxford University Press), pp. 45–9.

Scherer, Klaus R., and Zentner, Marcel R., 2001: 'Emotional Effects of Music: Production Rules', in Patrik N. Juslin and John A. Sloboda (eds), *Music and Emotion: Theory and Research* (Oxford and New York: Oxford University Press), pp. 361–92.

Spitzer, Michael, 2004: *Metaphor and Musical Thought* (Chicago: University of Chicago Press).

_____, 2006: *Music as Philosophy: Adorno and Beethoven's Late Style* (Bloomington, IN: Indiana University Press).

_____, 2008: 'A Metaphoric Model of Sonata Form: Two Expositions by Mozart', in Danuta Mirka and Kofi Agawu (eds), *Communication in Eighteenth-Century Music* (Cambridge: Cambridge University Press), pp. 189–229.

_____, 2009: 'Emotions and Meaning in Music', *Musica Humana*, 2009, 1/ii, pp. 155–96.

_____, 2011: 'The Topic of Emotion', in Esti Sheinberg (ed.), *Music Semiotics: a Network of Significations – in Honour of Raymond Monelle* (Farnham: Ashgate), forthcoming.

_____, 2012: 'Sad Flowers: Affective Trajectories in Schubert's *Trockne Blumen*', in Tom Cochrane, Bernardino Fantini and Klaus R. Scherer (eds), *The Emotional Power of Music* (Oxford and New York: Oxford University Press).

Stein, Deborah, 1989: 'Schubert's "Erlkönig": Motivic Parallelism and Motivic Transformation', *19th-Century Music*, 13/ii, pp. 145–58.

Stern, Daniel, 2000: *The Interpersonal World of the Infant* (New York: Basic Books).

Taruskin, Richard, 2005: *The Oxford History of Western Music, Volume 3: the Nineteenth Century* (Oxford and New York: Oxford University Press).

Tsai, Chen-Gia; Wang, Li-Ching; Wang, Shwu-Fen; Shau, Yio-Wha; Hsiao, Tzu-Yu; and Auhagen, Wolfgang, 2010: 'Aggressiveness of the Growl-Like Timbre: Acoustic Characteristics, Musical Implications, and Biomechanical Mechanisms', *Music Perception*, 27/iii, pp. 209–221.

Winters, Ben, 2008: 'Corporeality, Musical Heartbeats, and Cinematic Emotion', *Music, Sound, and the Moving Image*, 2/i, pp. 3–25.

NOTE ON CONTRIBUTOR

MICHAEL SPITZER is Professor of Music at the University of Liverpool. Author of *Metaphor and Musical Thought* (University of Chicago Press, 2004) and *Music as Philosophy: Adorno and Beethoven's Late Style* (Indiana University Press, 2006), he is president of the Society for Music Analysis and organised the inaugural International Conference on Music and Emotion.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd

ABSTRACT

This article analyses two works by Schubert, the first movement of his *Unfinished* Symphony and *Der Erlkönig*, in terms of the basic emotional category of Fear. Proceeding from the set of acoustic cues associated with the expression of Fear in musical materials, the article explores this emotional category both as an affective state and as a system of action tendencies enacted by the musical persona through a work's formal behaviours. Schubert's emotional processes are analysed from two standpoints: (1) as pathways through the affect space of Russell's circumplex model and (2) as ecological affordances of Öhman's fear-imminence trajectory. The article aims at a holistic approach insofar as it explores the continuum between empirical and aesthetic approaches to musical emotion: between psychological and physiological measurements of Fear evinced by sonic features, and philosophical concepts of Fear inherent in the musical sublime, as unfolded by substantial works of art music.

© 2011 The Author.
Music Analysis © 2011 Blackwell Publishing Ltd