

Bulletin of Psychology and the Arts



Society for the Psychology
of Aesthetics, Creativity,
and the Arts
Vol. 5 (2)
Winter 2005

In this issue:

**Art and Cognition! Consequences for
Experimental Aesthetics**

Helmut Leder,
Dorothee Augustin, and Benno Belke

**Categorization Affects Hedonic
Contrast in the Visual Arts**

Melissa J. Dolese, Debra A. Zellner,
Marsha Vasserman, and Scott Parker

**The Aesthetic Trinity:
Awe, Being Moved, Thrills**

Vladimir J. Konečni

**Individual Differences in the Validity
of Peer Ratings of Creative
Drawings: For Judging Creativity
Does It "Take One to Know One?"**

Stephen J. Dollinger



The Aesthetic Trinity: Awe, Being Moved, Thrills

Vladimir J. Konečni
 Department of Psychology
 University of California, San Diego

Abstract

Three related states — aesthetic awe, being moved or touched, and thrills or chills — are proposed as replacements for the imprecise “aesthetic emotions” and “musical emotions.” Aesthetic awe is regarded as the ultimate humanistic moment, the prototypical aesthetic response to a sublime stimulus, and one that has been sexually selected. The sublime is pancultural and encompasses great beauty, rarity, and physical grandeur (for music to become sublime, it requires a “colossal” performance setting). Aesthetic awe is a primordial mixture of joy and fear, which, like joy, requires existential safety. It is virtually indistinguishable from the fundamental emotions, yet one that can be more easily “switched off,” because the sublime is nonsocial and noninteractive. Aesthetic awe is always accompanied by the responses of being touched and (physiological) chills, but the latter two can also occur in awe’s absence. To be moved, a personal associative context is needed; memories, love, or a victory over mortality fears may play a part. Thrills are the most common aesthetic response, one that can occur without the others. It is argued that there has been a politically motivated campaign of “destructive deconstruction” of the ancient and classical sublime, resulting — in much contemporary art — in a costly clash with the authentic human responses of the aesthetic trinity. The possibilities of changing current trends and of converting the elitist guilt that often accompanies aesthetic awe into aesthetic altruism is discussed.

There is little doubt that human beings can respond powerfully and profoundly to great works of art, to extraordinary man-made objects, and to rare wonders of nature. Such “stimuli” (to use a technical, if rather pale, term), as well as the various components of the occasions of one’s exposure to them (including, especially, one’s resulting subjective state), leave deep impressions and are highly memorable: People include them in lists of

their peak life experiences (cf. Gabrielsson, 2001; Maslow, 1964, 1968; Panzarella, 1980).

It would seem that such an aesthetic phenomenon, perhaps the ultimate humanistic moment (Konečni, 2003b, p. 339), deserves serious inquiry, if not a central place, in a mature psychological aesthetics. The purpose of this paper is to identify some key conceptual relations in this domain of extreme aesthetic experience and to

propose heuristically useful definitions and nomenclature. Specifically, the paper discusses (a) aesthetic awe, (b) being moved or touched, and (c) thrills or chills, as the primordial and prototypic human responses to the sublime.

Among other benefits of this nomenclature, it is hoped that the use of the imprecise and misleading references to “aesthetic emotions” and “musical emotions” will hitherto be minimized. A section of the paper is devoted to a justification of this plea.

The Sublime

Stimulus-in-Context

The sublime has been discussed as a partner to the beautiful since at least a (now lost) first-century treatise by Caecilius of Calacta (referred to by the third-century Longinus or else a later pseudo-Longinus; cf. Berlyne, 1971). However, it can be documented that almost all the major commentators on the sublime in the tradition of philosophical aesthetics — from Burke (1757/1990) to Tarozzi Goldsmith (1999), by way of Kant (1790/1986) and Lyotard (1991/1994), have in their various statements confused the concept of the sublime by alternately (and sometimes simultaneously) treating it as both an object (or its attributes) external to the experiencing person and as the subjective, internally felt consequence of one’s exposure to a relevant stimulus array. In this paper, the sublime is considered to be external to the subject, as the ultimate aesthetic *stimulus-in-context* — a term which emphasizes that (especially its spatial) context is often an essential feature of a sublime stimulus. The Great Wall of China needs rolling hills to be sublime, and so did, ephemerally, the Running Fence (in Marin, Napa, and Sonoma Counties, California) by Christo (Javacheff).

Rarity and Beauty

According to all major commentators from Burke to Tarozzi Goldsmith, the sublime always includes, but is not limited to, exceptional,

universally acknowledged, beauty, which is also a strongly held position of this paper. However, the beautiful (as defined in numerous one- and two-factor models — cf. Berlyne, 1971) comparatively rarely includes or contains the sublime. Without wishing to enter a laborious and mostly — for the purpose of this paper — irrelevant discussion about the definition, universality, and relativity of beauty, the merely beautiful is here assumed to be far more common than the sublime, but also to be one of its obligatory components.

The beautiful will be treated as the extreme high end of the dimension of aesthetic pleasingness, as an attribute that is located in nature, in human artefacts, and, especially, in the synergy of an artefact and its natural milieu. It can be, at least in some contexts, objectively defined and empirically measured, for example, in the case of the “golden section” that has been studied from antiquity (Green, 1995; Konečni, 1997, 2001, 2003a, in press; Konečni & Cline, 2001).

Physical Grandeur

The rarity of the sublime is presumably a statistical concomitant of its often being immense in size — a relationship that is understandable from the standpoint of logistical baserates and evolutionary adaptation — and Derrida (1978), along with many others, has described the sublime as “colossal” (and also as “erect” and “petrified” — a reference presumably to the Pyramids of El Gizeh, especially the Cheops, or Khufu).

An object may be sublime despite an absence of physical grandeur, because of the unique or extraordinary context in which it is encountered. It is here assumed that the *Mona Lisa* is more sublime in the Louvre than if exhibited in another grand museum (that is, if it ever went “on tour”). But the contextual contrast can be expected to play a part, so that its sublime quality would be restored if the painting were placed in, say, the Angkor Wat in Cambodia or in a tiny Lutheran church in the remote fishing village of Kulusuk on Greenland. Note that it is here hypothesized that the multifaceted contrast with

Mona Lisa's customary home, rather than the physical size of the new one, would be operative.

Music, to be a sublime stimulus and induce aesthetic awe, may also require physical grandeur — of the space in which it is performed — in addition to having certain structural features and a significant personal associative context. This issue is addressed in a later section of the paper.

Existential Security

In contrast to Tarozzi Goldsmith's critical standpoint (1999, p. 96), the position of this essay is in agreement with Burke's and Kant's claims that the sublime can be "apprehended" only when the subject (experiencer) is "not in danger" — though one should add here "apprehended as aesthetically relevant." In this view, whether or not there is an objective degree of danger in a stimulus and its context, the subject will respond to it as a sublime object (that is, *aesthetically*, which would include finding it beautiful), only if there is no subjectively judged physical threat [cf. "accommodation" in Keltner and Haidt, 2003]. Berlyne (1971, p. 93) offers a brief, but lucid, analysis of this crucial characteristic of the sublime and the aesthetically-relevant physiological response to it, to the effect that "in stimulus situations classifiable as art, there are cues that inhibit the aversion system [in the brain] at least partially."

The notion of the sublime that involves an absence of physical threat is here extended to include a reasonable degree of existential comfort and security in the life of the potential experiencer: Existential well-being is considered a *sine qua non* for experiencing a potentially sublime stimulus as indeed sublime (rather than as simply a source of income or even as a nuisance). For example, the Cheops and the Great Sphinx may not be sublime to the desperately poor living at the feet of these wonders.

God's Dwelling is Sublime

It is little wonder that sublime objects — immense, beautiful, rare, and often inaccessible or

difficult to reach even if one lives in relative proximity — have been regarded as the dwellings of the deities or as their creations from the dawn of time in literally every part of the world and in every conceivable "pagan" and monotheistic religion. Admittedly, this is far more likely in the case of natural objects, especially mountain peaks and formations (from Denali to Ayer's Rock, and from Kilimanjaro to Olympus to Tai Shan to Fuji-san), than of man-made ones, but there are many exceptions. Antiquity may be necessary. There is no Sydney Opera House or Golden Gate Bridge cult (although the San Francisco Bay Area-based Grateful Dead "deadheads" may beg to differ), but there is the Parthenon, the Stonehenge, the Wailing Wall, St. Sophia, Machu Pichu, the Ka'ba, St. Peter's — in addition to the Cheops Pyramid.

One may venture to speculate that the naturally sublime objects first had an aesthetic impact and only subsequently acquired the legends and the religious mythology, whereas many of the man-made sublime structures — *all* of which were built, until the industrial revolution, at least ostensibly as religious objects (except perhaps for the Great Wall of China) — incorporated the aesthetic sublime from the start, presumably, in part, by intuitively imitating the key attributes of the sublime in nature.

The aesthetic and the religious are therefore often blurred in the sublime, in both the conception and the "consumption" — an idea that would not surprise art historians. Berlyne (1971) may have had similar notions when he formulated "ecological" stimulus variables, the impact of which arises from the classically-conditioned associations.

Commonalities in the Sublime across Cultures

"The [aesthetic] wisdom in many cultures has some common features..." (Chen, 2004, p. 1). The position of this paper with regard to pancultural aesthetic wisdom is that the commonalities across cultures are due to the fact that all living humans are products of the fundamentally similar selective evolutionary pressures and the same broad laws of supply and

demand in the context of finite resources, which has shaped the neuro-mental (brain-mind) apparatus of the *homo sapiens* (including his aesthetic responsiveness). These pressures continue in our time and it is therefore not surprising that there are common elements across time and cultures in both the intuitive definition of the sublime and the authentic responses to it — the primordial responses of aesthetic awe, of being deeply moved, and of experiencing thrills/chills.

It is sometimes uncritically assumed that “the modernization of ancient [aesthetic] wisdom may offer a solution [to present-day problems]” (Chen, 2004, p. 1). The hope that the ancient or classical aesthetic ideas (these two terms are used interchangeably in the present essay), especially if “modernized,” can alleviate some of the blight of contemporary life — “a neo-Chan (neo-Zen) solution to pollution,” to coin a mildly plausible, aesthetics-based, environmental clean-up campaign slogan for China and Japan — is probably unrealistic. The problem is that such solutions are in all respects subject to the same laws of supply and demand that were mentioned above and therefore are often superficial at best and of limited and ephemeral usefulness.

Therefore, the position of this essay is that rather than modernizing the features of the ancient approach that have led to awe-inspiring and moving aesthetic solutions, one should explore their *core attributes* — while obviously despising the brutal economics involved in the creation of the ancient sublime structures. These issues are further pursued in the final, *Implications*, section of the paper.

Awe and Aesthetic Awe

Awe

In their far-reaching, systematic paper, Keltner and Haidt (2003, p. 308), analyze the etymology of awe and usefully point out that according to the *Oxford English Dictionary* the meaning changed from fear of a divine being to “‘dread mingled with veneration...’” and,

significantly, to “‘...the attitude of a mind subdued to profound reverence in the presence of supreme authority, moral greatness, or sublimity, or mysterious sacredness.’” Keltner and Haidt (2003) do not pursue the notion of sublimity or of the sublime; they consider awe to be a “family” of emotions (e.g., Keltner, 2004) and in the very title of their paper mention awe as an “aesthetic” emotion (as well as a “moral” and “spiritual” one).

Keltner and Haidt (2003, p. 306) think of “primordial awe [as] center[ing] upon the emotional reaction of a subordinate to a powerful leader,” which would presumably make it closely related to one of the fundamental emotions, fear. The point of disagreement arises when Keltner and Haidt regard aesthetic awe as a culturally-elaborated extension of the primordial version (p. 310). The present view is that aesthetic awe is a response to the sublime that is as primordial as fear — and joy; in fact, it is assumed in this paper that it is composed of some elements experienced in both of these fundamental emotions. Whether the fact that it is a mixture makes aesthetic awe less fundamental than fear and joy is an open question.

Aesthetic Awe

Origin. Aesthetic awe has presumably occurred from primeval times as a response, initially, to the unexpectedly encountered natural wonders, and, later, to human artefacts also. As has already been implied, it involves a sense of suspense and of a controllable, interesting (as opposed to pleasing, in standard psycho-aesthetic terms) degree of risk. However, existential security cannot be in doubt — as it is not in joy. One is overwhelmed, but safely so: Niagara is fantastic, powerful, astounding, and extraordinarily beautiful, but I am safe (and not the one tumbling down the falls in a barrel)!

Aesthetic awe and the fundamental emotions. The centrality of the concept of the fundamental emotions in biopsychology is justified by their enormous evolutionary significance. They are psychologically and metabolically costly and

usually reserved for emergencies. When they occur, they are major existential events in human phenomenology. Among many other characteristics, they flood consciousness and are pan-cultural in terms of experience and expression; they usually have an unambiguous cause as well as object toward, or regarding which, to act (Konečni, 2003, p. 332).

Aesthetic awe is here proposed as the prototypical subjective reaction to a sublime stimulus. It is the most pronounced, the ultimate, aesthetic response, in all ways similar to the fundamental emotions. One possible difference needs to be mentioned. The experiencing person can cognitively “switch off” aesthetic awe at will by altering the focus of attention to other external and internal domains. This is because the sublime stimulus, a non-sentient, non-interacting, object — unlike the customary human causes of fear, anger, joy, and grief — does not press, from existential and evolutionary points of view, to be attended to urgently. In the language of legal psychology, aesthetic awe does not have a “knife focus.”

Aesthetic awe shares with both joy and grief the state of being moved, and, with the former, thrills also. Its requirement of existential safety differentiates it from — but places on the same continuum as — fear. With joy it shares the experience of thrills, which in fear is felt as chills. With all the fundamental emotions it shares a truly dramatic fluctuation in physiological arousal.

There are two moot reasons and a bad one for the fact that aesthetic awe had not been hitherto included among the fundamental emotions. The first debatable reason is the above-mentioned ease with which aesthetic awe can presumably be switched off — because the sublime does not react to the experiencer. The second moot reason is a statistical one, involving baserates [Berlyne's (1971) “collative variables”]: The sublime is extremely rare — and therefore a response to it has not been deemed important enough in folk tales and scientific nomenclature to deserve the status of the fundamental.

The bad reason is a challenge to aesthetic awe on adaptationist grounds. Music itself has been thus challenged (cf. Huron, 2001; Pinker, 1997). However, in the case of music, Miller (2000; cf. Gurney, 1880) provides a logically defensible explanation in terms of sexual selection (although music's role in primeval dance, with its providing opportunities for display of health and endurance, is not sufficiently emphasized).

Aesthetic awe (with the accompaniment of being moved and thrills) is assumed in this paper also to have been sexually selected. The experiencer's attributes and behaviors of (a) reverence (i.e., the presumed private access to the supernatural), (b) the apparent emotional and intellectual sensitivity (useful in child-rearing), and (c) elite-membership, demonstrated by the possession of the economic and physical means that enable the encounter with the sublime stimulus, make the experiencer of aesthetic awe a highly desirable sexual mate.

Recall and the physiological response. Like the sublime in stimulus sampling, aesthetic awe is, by definition, exceedingly rare in response sampling. It is of limited duration in terms of its acute physiological concomitants, but its immense original phenomenological impact (the flooding of consciousness at the time of the initial occurrence) insures that it can be easily recalled and remembered forever.

The ease and vividness of recall of the aesthetic-awe-inspiring occasions may well mean that the intensively recalled aesthetic awe can produce a physiological reaction (specifically, thrills or chills) — just as the recollections of fear-, anger-, joy-, and grief-inducing situations produce various autonomic (differential) physiological responses (e.g., Ekman, Levenson, & Friesen, 1983). An important assumption of the present paper, however, is that whereas the intensive recall of the sublime and aesthetic-awe can reproduce a state of being moved, the Wow! of the original aesthetic awe is irreproducible.

Aesthetic awe, elitism, and (pseudo-?)altruism. One is overwhelmed by the sublime

stimulus, but is safe — and *special*, one should add — a member of the chosen survivors, of the *electi*, of an elite — to have managed to be safely, and often exclusively, viewing the sublime stimulus. Importantly, to know how to “apprehend” it and generalize from it, while being joyous: “[F]eeling privileged to regard Mozart as a brother,...[sense] the larger truth hidden in the pinnacles of human achievement, and yet [realize], with some resignation, [one’s] miniscule [place] in the universe” (Konečni, 2003b, p. 339).

Suggesting that a sense of elitism may be an aspect of “lofty sentiments” (Konečni, 2003b, p. 339) may seem cynical, but is realistic from an adaptationist perspective. Instead, Haidt’s (2000) idea of “elevation,” of “rising up, including openness to altruism” (Haidt, 2004), implies a belief in the existence of “true altruism” that has been challenged by contemporary biologists on both theoretical and empirical grounds (Hamilton, 1964; Konečni, 1976; Trivers, 1971; Wilson, 1975). Thinking of oneself as being among the deep and sensitive *electi* may move one to some semblance of philanthropic behavior perhaps in part because one may feel guilty, rightly or wrongly, that one has not arrived at that status by chance or through a “democratic process” (Konečni, 2004c).

Aesthetic awe and hallucinations. By being defined as a response to a sublime stimulus, the future potential research on aesthetic awe should conceptually exclude drug-induced hallucinations and trance states that have been counted by various authors, especially Maslow (1964, 1968), as being among “peak experiences.” This is not meant to doubt the importance of such experiences or the great value of studying them. In fact, if one is truly open-minded, one must admit that one person’s Cheops is another’s LSD tablet.

Seeking aesthetic awe. The sublime is often an object that has been famous since antiquity and people who do not live near it may spend a lifetime hoping and planning to experience it. To do so, they often travel far and experience great inconvenience, expense, and even danger. When the sublime object has a religious significance, this

travel is sometimes formalized as pilgrimage (including, for example, the compulsory Muslim hajj to the 10.5 x 12 x 15-meter Ka’ba in Mecca), but the religious ones are far from being the only occasions for exhausting, expensive, and dangerous travel to the sublime [cf. Loewenstein’s (1999) discussion of extreme mountaineering and polar attempts, typically by pairs of people or small teams; solo attempts on the mountains, the Poles, and the oceans are in an even more exclusive league].

The approach to the sublime object may involve a gradual buildup of expectations that is akin to development in 19th-century musical compositions, except that it may be spread over hours, days, or much longer periods. There is typically also an increase in thoughts and activities that contribute to the eventual state of aesthetic awe. In the final stage of the approach, even though one may factually know that the sublime is “just around the corner,” there is the shock, the “Wow!,” when it is suddenly revealed, or revealed in full.

Being Moved or Touched

Being Moved: A Genuine Subjective State

In the present approach, aesthetic awe is considered to be always accompanied by the state of being moved or touched (these terms are used interchangeably). However, it is hypothesized that there are many instances of being moved by aesthetic stimuli that do not encompass, or reach, the ethereal, but powerful, aesthetic awe experience. In addition, one can be moved by non-aesthetic, usually social, stimuli that are of marginal relevance for this paper.

Aesthetic stimuli. Scherer and Zentner (2001, p. 384-385) have provided some interesting, albeit very brief and somewhat self-contradictory, comments on the state of being touched. As they point out, the German noun *Rührung* has no substantive counterparts in English and French (although there are nouns for both the stimulus and the response sides, for example, in Serbian: *dirljivost* and *dirmutost*).

They think of being moved both as a good descriptor of an intense response to music and as a feeling that is “rather vaguely described.” They point to the absence of a “concrete action tendency” and bring up the accompanying (though not conceptually essential for the Scherer-Zentner position) “...moist eyes, chills, thrills, or gooseflesh...” They view the state of being touched as one that should be regarded as a genuine emotion — while also saying that it is really not one (by their own Table 16.1, p. 363).

Even without a substantive, and contrary to the Scherer-Zentner characterization of it as a vague descriptor, “being moved” is actually a very distinctive subjective state that, like aesthetic awe, can be readily, reliably, and accurately reported. However, it is assumed in this paper that being touched is a response to a far greater range of stimuli than is the case with aesthetic awe. Moreover, the personal associative context plays a greater role in being moved than it does in aesthetic awe (Konečni, 1995-2004). For these reasons, being touched is considered to be more removed from the fundamental emotions both conceptually and phenomenologically than is the case with aesthetic awe.

In the present view, the examples of being moved, with the accompaniment of chills, can come from poetry, theatre (cf. Konečni, 1991; Shweder & Haidt, 2000; Stanislavky, 1936), film, opera (Stanislavski & Rumyantsev, 1975), and music. When the music-listening situation is physically ordinary, but a significant personal associative context exists, music with certain structural elements (Brown & Konečni, 2004; Sloboda, 1991) can induce a state of being moved and thrills. A later section addresses this issue in more detail.

Non-aesthetic stimuli. The fact that one can undoubtedly be moved by events other than those clearly delineated as aesthetic or artistic does not diminish the usefulness of the concept. Witnessing, in the real world, certain acts of forgiveness, sacrifice, and generosity is a frequent cause of being touched, although it would seem,

from the present viewpoint, doubtful that one needs to invoke a new emotion — “elevation” — as Haidt (2000) does, to deal with the resulting state.

In summary, in the present account, the category of events that can induce a state of being moved includes both aesthetic and non-aesthetic members. Among the aesthetic events, very few, the sublime, can produce aesthetic awe in addition to the state of being moved. Analogously, among the non-aesthetic ones, witnessing certain acts, for example, of extreme (apparent) selflessness may produce awe in the Keltner-Haidt (2003) moral or spiritual sense, in addition to being moving. (Witnessing such acts may involve sympathy and empathy that are usually missing in one’s being moved by aesthetic stimuli.) The term “elevation” (Haidt, 2000) may become useful if it can be shown that being moved either by aesthetic stimuli (e.g., music), or by acts of selflessness, has similar behavioral consequences, such as an increase in the probability of prosocial acts. Research that addresses these questions is currently being pursued (Brown & Konečni, 2004; Haidt 2004).

Epiphany and Love

In the present view, merely witnessing a beautiful natural spectacle — a sunset, a starry night, a chain of snow-capped mountains — is not sufficient to induce a state of being moved without the involvement of additional factors. Such, non-aesthetic, factors, a few of which are mentioned below, may predispose the experiencer to be moved by sights that are indeed objectively beautiful, but are encountered too frequently and regularly to have (or maintain) the power, on their own, to move.

Victory over mortality fears. One may be moved by the starry sky that one has frequently encountered on that special occasion when one teaches a young child, one’s genetic heir, for the first time, about the infinity of cosmos and the relativity and continuity of life. Or one may, on another occasion, finally manage to relate one’s moral core to infinite space-time, which one perhaps finds in Kant’s sentence (1788/1996) that

is etched on his tombstone: "A starry sky above me and a moral law within." Such a personal victory over mortality fears should perhaps be considered an epiphany.

Solution of a complicated problem. A fairly common natural sight may move one when it coincides or follows closely in time one's finding the solution to an important and elusive intellectual problem or one's reaching the decision concerning a major issue in one's life. The beauty of the sight "harmonizes" with the post-solution or post-decision inner peace.

Boundless love and falling in love. It is not important whether an average starry night is genuinely perceived as magnificent by a person falling in love or whether one craftily embellishes it (and then perhaps begins to believe it), in order to prod one's partner into responding romantically: A starry-night-cum-love idyll is likely to have played a part in the personal history of every reader of this paper.

Being Moved by Reading about Being Moved

Until this point, the experiencer's states of aesthetic awe and of being moved were discussed as responses to real events — to the real-world sublime and aesthetic stimuli. However, especially in an article on aesthetic issues, it would not do to neglect people's highly relevant responses to the described and acted-out events in the worlds within legends, novels, plays, operas.

Whereas books and reading them are obviously real, the events in them are either real, but described or depicted, or entirely fictional. The experiencer as the direct witness is replaced by the reader who is presented with the results of the author's interpretive lens. Even more interestingly, the story may describe a character experiencing aesthetic awe and being moved: What does the reader feel (other than admiration for the great writing)? The implications of the reader's one- or even two-step removal from the aesthetic stimulus (such as, for example, when characters are described as responding to film scenes within novels or actors emotionally respond to plays

within plays) are instructive in the light of this essay's position. A few illustrative examples follow.

Saul/St. Paul; Arjuna. A rather detailed account of awe, epiphany, and conversion that was experienced by Saul on the road to Damascus (The Acts 9.3-7), and the mythical Arjuna in the Bhagavadgita section of the Hindu epic the Mahabharata, is provided by Keltner and Haidt (2003, pp. 298-299). Both Saul/Paul and Arjuna are described in the original texts as experiencing a great deal of fear, and therefore, from the present viewpoint — although some of Arjuna's visions could be considered aesthetic — portraying these personages' *aesthetic* awe was certainly not the primary intent of the two sources' anonymous authors.

It is an empirical question, but it would seem that most present-day readers of the two accounts would experience neither awe nor aesthetic awe. They might, however, be moved and experience chills.

Natasha Rostova. In Lyov Tolstoy's (1869/1931, pp. 387-388) *War and peace*, there is a famous moonlight-cum-love scene involving the teenage Countess Natasha Rostova and Prince Andrey Bolkonsky, which is instructive from the standpoints of both the author's various intentions and the reader's likely reactions.

Natasha is falling in love with Andrey. Late at night, she gazes at the moon and says to Sonya, her teenage companion, "...almost with tears in her voice... 'Do you know such an exquisite night has never, never been before.'" Sonya is unimpressed by the moonlit garden scene and wants to sleep. Andrey, nearby, can "hear the rustle of her garments and even her breathing" but "dare[s] not stir for fear of betraying his unintentional presence." Natasha continues to Sonya: "...do look, what a moon!... One has only to squat on one heels like this — see — and to hold to one's knees — as tight, as tight as one can — give a great spring and one would fly away."'

So, Tolstoy apparently thinks, via Sonya's fictional behavior, that the beauty of the moonlight and starry night in the real world is not sufficient

by itself to induce aesthetic awe or being moved or thrills — the states which Natasha is unequivocally described as experiencing, but only with the big help from her headlong falling in love. Nor does empathy with her friend in the throes of aesthetic awe move sleepy Sonya. Nor does Tolstoy say anything about Andrey's being moved — for Andrey, an impeccable gentleman, is too embarrassed and too scared of being discovered to have the mental luxury of being moved.

On the other hand, the reader (perhaps like Tolstoy himself while writing this short scene) is moved and gets thrills and a lump in the throat from “listening” to Natasha as she creates aesthetic awe out of average moonlight and true love. However, the reader, in the terminology of this paper, does not experience aesthetic awe.

The sublime, aesthetic awe, and fate. In his short story *Fate* (1991/2001) the contemporary Chinese writer Jin Shui intuitively, and without mentioning any aesthetic issues, explores the nature of the sublime, of aesthetic awe, and of being moved. There are three key sequential elements in the story: (a) a mention of magnificent man-made and natural wonders that are located worldwide; (b) the narrator's intense anticipation of seeing them; and (c) a fateful event that forever precludes the narrator from fulfilling his dream.

The story is explicitly autobiographical and written in the first person. Because cruel fate affects a real person, and moreover one who speaks to the reader directly from the world of the story, the reader's empathy is more likely.

A young mainland-Chinese man is riding on his bicycle in his home town, happy because he would soon realize his dream of going abroad to study (he is one of “the chosen”).

“An ordinary summer night. I whistled a tune. The world is very large. I think I'll go to visit the Grand Canyon in Arizona on one of my vacations and Niagara Falls on another. If I live very frugally, maybe I can also visit the Great Pyramid of Cheops, St. Mark's Cathedral, Mount Fuji” (p. 24).

The narrator/protagonist is listing sublime objects and experiencing anticipatory aesthetic awe. The reader does not himself feel aesthetic awe, especially because the objects are not even described. He is, however, being inexorably drawn into the story by the familiarity of the sublime objects and by rooting for the narrator in his quest; this development (as in music) increases the likelihood of subsequently being moved (see Footnote 1). There is also an element of suspense, of a certain unease that something untoward might soon happen in the story: The reader is safe, but the protagonist — and the author! — are not.

Indeed the protagonist has a bicycle accident, for which there is no one and nothing to blame (except for an aubergine lying in the street), and in a split of a second, his life is changed forever, for he is left paralyzed below the waist.

To this the adequately primed reader responds with being deeply moved and with chills. It is clear that the reader's reaction is caused largely by the magnitude of the protagonist's loss, the reader's identification with the narrator, and the consequent empathy. But even though the primary stimulus for the reader is not aesthetic, her empathy with the protagonist is enabled, in large part, by the latter's response of anticipated awe to the sublime objects the reader knows about, has herself experienced, or would very much want to experience.

The sublime, aesthetic awe, and guilt. Sigmund Freud saw the Acropolis for the first time when he was a mature man, at 48 years of age, in 1904, but never forgot the aesthetic awe he experienced on the occasion. In a letter to Romain Rolland in 1936, when Freud was 80 and Rolland 70, Freud described a complex state that one can describe as being deeply moved by finally reaching something that had been so grandiose as to appear out of reach.

Writing about this letter, Zbigniew Herbert (2003), a Polish critic, comments that in reading it he experienced the state of being moved in part because, in his own case, when he was confronted by the sublime works of man or nature, he always

felt guilt concerning the people dear to him who could not be present to share his aesthetic awe. The guilt, sense of loss, separation from friends, and an evocation of past grieving to which Herbert alludes, may be important for the chills/thrills response.

The writer of the present paper recalls his first glimpse of the Acropolis and the Parthenon at eleven years of age: Aesthetic awe at this magnificent object, within reach, but so high, splendid, and mighty — and the sense of wonder and being moved, accompanied by the thrills — all to be remembered forever; and, unlike Freud and Herbert, no sense of regret or guilt — the blessing of childhood and immaturity.

Thrills or Chills

These terms (see Footnote 2) refer to the archaic physiological response of short duration to aesthetic (and other) stimuli: Piloerection on the back of the neck; shivers down the spine that can spread to arms and other parts of the body; sometimes a lump in the throat or even tears. The state can be reported by the experiencing person with a high degree of reliability; also, chills can be objectively measured in terms of skin conductivity (Blood & Zatorre, 2001; Panksepp, 1998). Since Goldstein's (1980) pioneering study, there has been a considerable amount of controlled laboratory work on this phenomenon, especially in response to music (e.g., Brown & Konečni, 2004; Konečni, 1995-2004; Panksepp, 1995; Sloboda, 1991; Waterman, 1996).

Goldstein (1980) has shown that the incidence of thrills in response to music can be reduced by drugs that are opiate receptor antagonists, such as naloxone. In addition, sophisticated scanning techniques, such as positron emission tomography have been used to monitor the cerebral blood flow, during the experience of thrills, in the ventral striatum, the midbrain, and the amygdala that are also involved in the fundamental emotions (Blood & Zatorre, 2001). However, it is important to stress that just because the stimulus

situations that produce the fundamental emotions, and those that produce chills, both cause blood-flow changes in the same general areas of the brain, does not necessarily mean that the respective phenomenological experiences and evolutionary implications are the same in the two cases. Thrills sometimes accompany the fundamental emotions, but far more frequently occur in their absence.

In the present approach, thrills are considered to be the most frequent response to aesthetic stimuli. In response to the sublime, thrills always occur together with aesthetic awe and being moved. Additionally, it is assumed that most occurrences of being moved are also accompanied by chills; the exceptions consist of the relatively rare people who have a lower threshold for experiencing (or admitting to) being moved than for experiencing (or admitting to) thrills (Konečni, 1995-2004). Music with certain structural elements (Brown & Konečni, 2004; Sloboda, 1991), but devoid of personal associations and heard in an ordinary space, is a frequent cause of chills — without the deeper aesthetic responses being present. Finally, there are the horror and tear-jerker movies, in which a person also does not experience either aesthetic awe or being moved, but only chills or tears. The superficiality of these responses from an aesthetic point of view, despite their appeal to some, is demonstrated by the ease with which the experiencer can terminate the response.

It should be noted that all the aesthetic responses, especially being moved and thrills, require that the experiencer attends closely to the relevant stimuli. The paper does not deal with “background music” (in the broad sense).

Music as a Special Case

Certain psychophysical attributes of spatial stimulus arrays (cf. Berlyne, 1971), including vast size and appealing proportions, contribute to their sublime quality and capacity to induce aesthetic awe. The question, from the standpoint of the present approach, is whether music can be sublime

and which of its features make it able to move and touch the listeners.

Research participants have reported (e.g., Konečni, 1995-2004; Panksepp, 1995; Sloboda, 1991) that various structural features of music, including crescendos, unusual harmonies, dissonant chords, high-pitched solo vocals, guitar “riffs,” sudden changes in dynamics, and fast tempo on percussion instruments, among others, can cause them to experience thrills. Surprise and incongruity (Berlyne, 1971), a violation of expectations (Meyer, 1956), and traditional melodies that are typically described as “beautiful” (cf. Gurney, 1880) may also cause chills.

However, these structural-temporal (harmonic, melodic, modal, dynamic, and timbre-based), and lower-level cognitive, effects are not, in the present view, sufficient to make music touching. One often experiences thrills while listening to music without being moved. In addition, one can analytically, without being moved, in the tradition of Eduard Hanslick’s dictum “the beautiful is and remains beautiful though it arouse[s] no emotion whatever” (1854/1957; cf. Stravinsky, 1936), admire the score or the gift and skill of the composer and performers — as if the sonic stimulus were a chess or mathematical problem.

Furthermore, the possibility that music and emotional experience have similar temporal patterns (Gurney, 1880; Langer, 1942), and that a listener of (even non-“program”) music can therefore decipher that it is attempting to evoke or depict an emotional state, does not necessarily move the listener. Being moved is a serious matter and it cannot be cheaply induced.

Buttressed by research (Konečni, 1995-2004) that has demonstrated enormous individual differences, the present contention is that what makes a piece of music moving for a particular listener is her personal associative context. The phenomenological experience of being moved may be similar, but the associative web that is interposed between the sound and the state of being touched is unique to each person (cf. Budd, 1985, p. 53; Gurney, 1880). And even though this personal

associative web can also be activated by non-musical aesthetic and non-aesthetic stimuli, chills are here regarded as far more frequent and predictable — archaic, but shallow — than the state of being moved.

Finally, can music be sublime? Can it induce aesthetic awe — a state that is more profound, exhilarating, and elevating than are those of being moved and experiencing thrills, but includes them? In the present view, to be sublime, music must be “colossal,” and this status it can achieve only by being performed in vast architectural spaces that have not only excellent acoustic qualities, but are also of extraordinary beauty. Perhaps the prototypical examples of this, and, not surprisingly also the ones with the longest tradition of performance of music of the highest caliber, are European mediaeval cathedrals and churches. In them one can encounter a truly sublime combination of vast space and soaring music, in addition to various stimuli that can produce a wealth of personal associations (including those classically conditioned since childhood), so that the result can be the “aesthetic trinity” of awe, being moved, and experiencing thrills (see Footnote 3).

Implications

Aesthetic and Musical “Emotions”

The nomenclature that has been proposed in this paper can perhaps replace the unsystematic, imprecise, and sometimes casual references to the aesthetic and musical “emotions,” with which the literature is replete, and lead to a conceptual re-orientation and methodological improvements.

In the belief system and parlance of many a Sue Doe and music and art teacher, music and art induce fundamental emotions in the listener and viewer. Such folk views are often echoed by the musicological position that music directly causes emotions (e.g., most chapters in the Juslin and Sloboda, 2001, edited volume; Budd, 1985, p. 31) and the call for “aesthetic emotions” and “musical emotions” that is returned by the titles of

articles published in major journals (e.g., Keltner & Haidt, 2003; Krumhansl, 1997).

The conceptual, methodological, and terminological problems in the literature, as seen from the present position, fall in several related categories (these issues are further pursued in papers by Brown & Konečni, 2004, and Konečni 2004a, 2004b):

1. A confusion is introduced by many investigators, both conceptually and methodologically, and for both research subjects and readers of articles, between the “emotions” in the music (which is non-sentient and can only depict or evoke emotions) and the induced subjective state of the listener (e.g., Krumhansl, 1998; Sloboda & Lehman, 2001).

2. The casual use of the plural in “aesthetic or musical emotions” suggests that authors frequently ignore the biological significance of the emotions (cf. Budd, 1985). After all, every language possesses, for multiple extraneous reasons, literally hundreds of labels for things “emotional” — and these labels some authors misapply to internal states.

3. The terms for the emotions that are produced by interacting with human beings in major life situations are too readily used for the effects of music. Debatable theoretical assumptions about emotions translate into debatable methods. Research participants may, for example (Krumhansl, 1997), be asked to rate continuously the “amount of sadness [or happiness or fear] they experience” (p. 340) in response to six three-minute musical excerpts that are “chosen to represent” sadness, happiness, and fear (two each). In 18 minutes, the subjects are thus implicitly — and highly unrealistically — expected to experience two episodes each of the fundamental emotions of sadness, happiness, and fear (in a mixed order) and respond during these episodes continuously on a “sadness” (or “happiness” or “fear”) scale.

4. The few experiments that claim to have demonstrated a causal effect of music on emotion (Krumhansl, 1997; Nykliček, Thayer, & Van

Doornen, 1997; Witvliet & Vrana, 1996) have actually produced rather ambiguous results, yet are readily overinterpreted in secondary sources. In general, music has been too uncritically regarded as a link between cognition and emotion (e.g., Gaver & Mandler, 1987; Krumhansl, 2002).

5. With the notable exception of the research by Vaitl, Vehrs, and Sternagel (1993) on 27 listeners’ responses to Wagner’s operas at Bayreuth, the special situations in which music can become sublime are not considered by the papers that claim a causal effect of music on emotion. In fact, most research studies are set up in such a way — in terms of the choice of musical materials, research locations, duration of listening, and other methodological details — that even being moved is most unlikely to be experienced by the participants. What one gets in most studies, at best, are thrills — and verbal ratings of the music.

It would seem that most researchers are keen listeners to music and that they have repeatedly experienced aesthetic awe, the state of being moved, and chills in their private lives. However, these profound personal responses to music, and presumably to other arts, have generally not inspired research that could adequately explore them. It is hoped that this essay is a useful step toward rectifying the current research and theoretical trends.

The Aesthetic Trinity and the Artworld

The classical and the modern: A discontinuity. From a musical segment to Iguazú Falls, and from the droplets on a cobweb below a leaf in the lower reaches of Mt. Fuji to a Rothko manifold or the Great Wall of China — crumbling and reduced to a third of its original size (Xinhua/Reuters, 2004) — aesthetic stimuli, man-made and natural, have been analyzed and thought about by generations of artists, critics, and both philosophical and empirical aestheticians.

When the evidence is examined, a sharp discontinuity with the ancient and the classical is observed in the art of the 20th-century, especially in Europe and America (areas of massive and

influential art production), such that many approaches in many art forms — serial and aleatory music, DADA, postmodern dance, conceptual, “bluff,” and “decay” art, “anti-illusionist” theatre, visual and “nonsense” poetry, to mention just a few without regard to chronology — have systematically severed the link with the ancient and classical approaches. In so doing, they have eliminated the sublime: Aesthetic awe and being moved have become unacceptable responses to which public art must not cater (see Footnote 4).

The rejection of the sublime and the moving can be labeled “destructive deconstruction.” This art-political agenda has had considerable economic and social costs and detrimental implications for how public art is done and financed worldwide.

Aesthetics and politics. In large part, especially in the last third of the 20th century, destructive deconstruction has been vigorously promoted by the new art hyper-elite, the highly politicized museum curators and international festival directors, with the connivance of governmental art bureaucrats. All have striven to eliminate classical art, treating it as a weapon of oppression that had been wielded by the dead (and half-dead), white (and off-white), (mostly) heterosexual, exploitative males.

The present position is that these curators and the postmodern artists shaped by them have not attacked the exploitative, wasteful, and militaristic oppressors, but rather the primordial core of the human aesthetic-emotional response — that is, the perceptual, cognitive, and, especially, emotional apparatus that our species uses to deal with the sublime and the deeply moving.

For this reason, the prediction of this essay is that postmodernism (broadly defined) will fail and that it would have failed even if its political objectives were just and equitable.

Although it is true that magnificent art inspires aesthetic awe and moves deeply regardless of its stated deconstructive intentions, the layers of nonsense that are introduced for selfish or political reasons do not come cheap. The political

pretense in 20th-century art has had quite real human and economic costs.

To give a pre-postmodern example, Bertolt Brecht proved to be too masterful a dramatist to be able to prevent the audiences at his “epic” (presumably anti-Stanislawskian and anti-bourgeois) Berlin stagings of *Mother Courage* from Aristotelian cathartic sobbing (Konečni, 1991), but another way of viewing his approach is that the entire “distancing” (*Verfremdung*) idea and the associated removal of empathy (*Einfühlung*) were simply politically expedient. Note that this disingenuousness of Brecht’s (perhaps itself insincere — which adds another twist, one that was used also by Picasso, and rather common in 20th-century art) had an immeasurable social cost incurred by the explicit support of the world-famous Berliner Ensemble for the highly repressive German Democratic Republic (DDR).

As an apparent counter-example, it could be claimed that Christo’s running fences, wrapped islands and coastlines, curtained-off canyons, thousands of blue and yellow umbrellas dispersed simultaneously on hillsides in two countries, and wrapped classical bridges, genuinely inspire aesthetic awe and move — yet seem to be the crystallization of postmodernism. However, the point is that they induce aesthetic awe despite their tongue-in-cheek ephemerality and, especially, despite the equally tongue-in-cheek process of (pseudo-)democratic and ecologically-conscious negotiation with the local authorities (among whom have been the Paris *clochards* and the Marin County, California, farmers) that is supposedly a crucial part of Christo’s works. One’s response to them is aesthetic awe in part because the emphatically ephemeral attribute of the works is so stunningly juxtaposed with their sublime quality.

It remains an open question whether the politically-correct blather that surrounds Christo’s works analogously contributes to their impact by its triviality being juxtaposed with the works’ monumentality: Is it necessary to be oblivious to hype in order to experience aesthetic awe?

It is instructive to contrast Christo's sublime ephemera with those that can be thought of as the hallmark of recent postmodernism, namely, the rapidly reproducing examples of "decay art." In them one observes an economically, aesthetically, and olphactorily foul paradox of the obscenely expensive, cutting-edge scientific procedures being used by museums to preserve and restore what, in its original state, shrilly (though disingenuously) insisted on being sticky, messy, and rotting — ephemeral (cf. Barnes, 2003).

This is a joke in the Duchamp tradition, but one that would offend the grand bluff-master's sense of clarity and order (observed in his excellent chess-playing), as well as his purity (the urinal and bicycle wheel were reputedly spotless). One has here a pseudo-progression of the "new" — but it is a costly exercise that is radically dissociated from the tradition that leads back to the ancient sublime.

Art consumption and altruism. One might wonder about the broader layers of sensitive art consumers and their private and genuine, as opposed to the public and scared, reaction to the new curatorial dogma. Such people are likely to be over-represented among those who, when experiencing aesthetic awe, guiltily regard themselves as privileged and "chosen."

To convert into *aesthetic altruism* the guilty component of the elitism that has been here hypothesized as an ingredient of aesthetic awe — perhaps experienced precisely by those who most genuinely seek the sublime in art and nature — seems as a socially responsible alternative to destructive deconstruction. One should strive for a serious philanthropy with global ambitions that would be devoted to financing the contemporary creation of the "new old" sublime art — in parallel with the conservation of the existing natural and man-made wonders — as a post-postmodern, enlightened, version of *noblesse oblige*.

It might be argued that the project of destructive deconstruction seeks social justice by dismantling the sublime. The contention here, however, is that the goal of making the sublime

widely accessible is eminently more just and altruistic than is the metaphorical and literal cultivation of termites for the purpose of demonstrating how allegedly rotten the ancient sublime house is.

This is not the occasion to discuss the bread part of *panem et circenses*, nor is it possible here to suggest how decency and equity should be brought into the cynical Roman formula; but the sublime is the deadly enemy of the circus as a crass and violent entertainment. Education that encourages the quest for aesthetic awe would be a welcome part of a political agenda that is devoted to a constructive role of aesthetics in contemporary life.

Footnotes

1. It is important to re-emphasize that this natural/man-made distinction is not a sharp one. For example, Mount Fuji is a dead volcano, but also, as "Mount Fuji," it is a symbolic achievement of the human spirit and this essay's author was acutely aware, while climbing it to the summit from Fuji Sengen-jinja (a famous Shinto shrine in Fuji-Yoshida at the volcano's base), of the countless generations of awe- and aesthetic-awe-struck monks and priests who preceded him and built temples and shrines along the paths. The author's aesthetic awe and thrills at the summit were not a "mountain high," but in part caused by the sense of being privileged to follow in the footsteps of prior generations of monks in a distant land.

2. Panksepp (1995, 1998, pp. 278-279) has argued for the music-induced thrills to be regarded as reflecting the activation of our "ancient separation-distress response systems," on the grounds that his data show that "sad music" is a more powerful inducer of chills than "happy music," and that women — presumably the primary caregivers and thus more attuned than men to distress calls — are differentially more responsive to "sad music" than men. In addition, because his data show that women, unlike men, prefer the term "chills" to "thrills," Panksepp himself prefers the

former term. However, there are indications that these generalizations may be limited to Panksepp's subject samples in Ohio. Because of the mixed results obtained in the present author's laboratory regarding these matters (Konečni, 1995-2004), and the fact that Goldstein's (1980) early paper used "thrills" in the title, the terms "thrills" and "chills" are used interchangeably in the present paper.

3. As just two personal examples (in which unique associative and semiotic elements, in addition to the beauty of the space and the music, were involved), this paper's author can cite his experiences at Dom zu Salzburg and Thomaskirche in Leipzig. At the Salzburg Festival in 1991, Mozart's *Requiem* in D Minor (KV 626, completed by Franz Xaver Süssmayr) was performed by the Vienna Philharmonic at the Salzburg Cathedral, conducted by Carlo Maria Giulini. The performance poignantly marked the passage of two centuries since the composer's death in the place in which he had been baptized. At St. Thomas's Church, where Johann Sebastian Bach had been Kantor, the author sat literally at Bach's tomb while Bach's distant heir to the Kantor position in 1991 (241 years after Bach's death) played *Tocatta* and *Fuga* D Minor (BWV 565) at the author's request — at 7:30 in the morning.

4. Tarozzi Goldsmith (1999) contends that the new in art maintains the (presumably essential) sublime in it despite the nihilistic onslaught from Nietzsche on. From this essay's standpoint, the view of the centrality of the new in the sublime is an only superficially attractive idea. To save the sublime in art from destructive deconstruction, the new must have an assured degree of continuity (or, more accurately, "continuity") and the series must be conceptually extended not only forward, but also backward, to the ancient artworks. Thus the continual new that manages repeatedly to recreate the sublime must maintain its ancient core. There is nothing new under the sun in aesthetics, or, rather, in the attributes of the stimuli that are capable of producing aesthetic awe.

References

- Barnes, B. (2003). When art of decay decays, what's a curator to do? Aging dung, blood and food give conservators fits. *The Wall Street Journal*, October 28, p. 1.
- Berlyne, D. E. (1971). *Aesthetics and psychobiology*. New York: Appleton-Century-Crofts.
- Blood, A. J., & Zatorre, R. J. (2001). Intensely pleasurable responses to music correlate with activity in brain regions implicated in reward and emotion. *Proceedings of the National Academy of Sciences*, 98, 11818-11823.
- Brown, A., & Konečni, V. J. (2004). Comparative effects of valenced music and recalled life-events on self-ratings and physiological thrills/chills. Unpublished manuscript. University of California, San Diego.
- Budd, M. (1985). *Music and the emotions*. London: Routledge & Kegan Paul plc.
- Burke, E. (1757/1990). *A philosophical enquiry into the origin of our ideas of the sublime and beautiful*. Oxford: Oxford University Press.
- Chen, W.-h. (2004). *Call for papers*. The Wuhan University Aesthetics Conference on "Beauty and the Way of Modern Life." Wuhan, China, May 2004
- Derrida, J. (1978). *La vérité en peinture*. Paris: Flammarion.
- Ekman, P., Levenson, R. W., & Friesen, W. V. (1983). Autonomic nervous system activity distinguishes among emotions. *Science*, 221, 1208-1210.
- Gabrielsson, A. (2001). Emotions in strong experiences with music. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 431-452). Oxford: Oxford University Press.
- Gaver, W. W., & Mandler, G. (1987). Play it again, Sam: On liking music. *Cognition and Emotion*, 1, 259-282.

- Goldstein, A. (1980). Thrills in response to music and other stimuli. *Physiological Psychology*, 8, 126-129.
- Green, C. D. (1995). All that glitters: A review of psychological research on the aesthetics of the golden section. *Perception*, 24, 937-968.
- Gurney, E. (1880). *The power of sound*. London: Smith, Elder.
- Haidt, J. (2000). The positive emotion of elevation. *Prevention & Treatment*, 3, 1-4.
- Haidt, J. (2004). Personal communication, March 11, 2004.
- Hamilton, W. D. (1964). The genetical theory of social behaviour. *Journal of Theoretical Biology*, 7, 1-52.
- Hanslick, E. (1854/1957). *Vom Musikalisch-Schönen*. Translated in 1891 by G. Cohen as *The beautiful in music*. Indianapolis: Bobbs-Merrill Co.
- Herbert, Z. (2003). Dušica. Translated from Polish to Serbian by B. Rajčić Književni Magazin, No. 25-26, July-August., pp. 2-5.
- Huron, D. (2001). Is music an evolutionary adaptation? *Annals of the New York Academy of Sciences*, 930, 43-61.
- Jin Shui [Shi Tie-sheng.] (1991/2001). *Fate*. Translated from the Chinese by M. S. Duke. In C. Choa & D. Su Li-qun (Eds.), *Contemporary Chinese fiction*. New York: Vintage Books.
- Kant, I. (1788/1996). *The critique of practical reason*. Translated from the German by T. K. Abbott. Amherst, NY: Prometheus Books.
- Kant, I. (1790/1986). *The critique of judgment*. Translated from the German by J. C. Meredith. Oxford: Clarendon Press.
- Keltner, D. (2004). Personal communication, February 13, 2004.
- Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. *Cognition and Emotion*, 17, 297-314.
- Konečni, V. J. (1976). Altruism: Methodological and definitional issues. *Science*, 194, 562.
- Konečni, V. J. (1991). Psychological aspects of the expression of anger and violence on the stage. *Comparative Drama*, 25, 215-241.
- Konečni, V. J. (1995-2004). Unpublished laboratory and classroom data on the effects of musical and theatre stimuli on (physiological) thrills. University of California, San Diego.
- Konečni, V. J. (1997). The vase on the mantelpiece: The golden section in context. *Empirical Studies of the Arts*, 15, 177-207.
- Konečni, V. J. (2001). The golden section in the structure of 20th-century paintings. *Rivista di Psicologia dell'Arte*, Nuova Serie, 22, 27-42.
- Konečni, V. J. (2003a). The golden section: Elusive, but detectable. *Creativity Research Journal*, 15, 267-276.
- Konečni, V. J. (2003b). Review of P. N. Juslin & J. A. Sloboda (Eds.), *Music and Emotion: Theory and Research* (2001). *Music Perception*, 20, 332-341.
- Konečni, V. J. (2004a). Ancient and contemporary aesthetic "emotions." Invited plenary lecture at the Wuhan University Aesthetics Conference on "Beauty and the Way of Modern Life," Wuhan, China.
- Konečni, V. J. (2004b). On music and "emotion." Unpublished manuscript. University of California, San Diego.
- Konečni, V. J. (2004c). Personal communication to Jonathan Haidt, March 11, 2004.
- Konečni, V. J. (in press). On the "golden section." *Visual Arts Research*.
- Konečni, V. J., & Cline, L. E. (2001). The "golden woman": An exploratory study of women's proportions in paintings. *Visual Arts Research*, 27, 69-78.
- Krumhansl, C. L. (1997). An exploratory study of musical emotions and psychophysiology. *Canadian Journal of Experimental Psychology*, 51, 336-352.

- Krumhansl, C. L. (1998). Topic in Music: An empirical study of memorability, openness, and emotion in Mozart's String Quintet in C Major and Beethoven's String Quartet in A Minor. *Music Perception, 16*, 119-134.
- Krumhansl, C. L. (2002). Music: A link between cognition and emotion. *Current Directions in Psychological Science, 11*, 45-50.
- Langer, S. K. (1942). *Philosophy in a new key*. Cambridge, MA: Harvard University Press.
- Loewenstein, G. (1999). Because it is there: The challenge of mountaineering...for utility theory. *Kyklos, 52*, 315-344.
- Liotard, J.-F. (1991/1994). *Lessons on the analytic of the sublime*. Translated from the French by E. Rottenberg. Stanford, CA: Stanford University Press.
- Maslow, A. H. (1964). *Religions, values, and peak-experiences*. Columbus: Ohio State University Press.
- Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). New York: Van Nostrand Reinhold.
- Meyer, L. B. (1956). *Emotion and meaning in music*. Chicago: The University of Chicago Press.
- Miller, G. (2000). Evolution of human music through sexual selection. In N. L. Wallin, B. Merker, & S. Brown (Eds.), *The origins of music*. Cambridge, MA: MIT Press.
- Nykliček, I., Thayer, J. F., & Van Doornen, L. J. P. (1997). Cardiorespiratory differentiation of musically-induced emotions. *Journal of Psychophysiology, 11*, 304-321.
- Panksepp, J. (1995). The emotional sources of "chills" induced by music. *Music Perception, 13*, 171-207.
- Panksepp, J. (1998). *Affective neuroscience: The foundations of human and animal emotions*. Oxford: Oxford University Press.
- Panzarella, R. (1980). The phenomenology of aesthetic peak experiences. *Journal of Humanistic Psychology, 20*, 69-85.
- Pinker, S. (1997). *How the mind works*. London: Allen Lane.
- Scherer, K. R., & Zentner, M. R. (2001). Emotional effects of music: Production rules. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 361-392). Oxford: Oxford University Press.
- Shweder, R. A., & Haidt, J. (2000). The cultural psychology of the emotions: Ancient and new. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed.; pp. 397-414). New York: Guilford.
- Sloboda, J. A. (1991). Musical structure and emotional response: Some empirical findings. *Psychology of Music, 19*, 110-120.
- Sloboda, J. A., & Lehmann, A. C. (2001). Tracking performance correlates of changes in perceived intensity of emotion during different interpretations of a Chopin piano prelude. *Music Perception, 19*, 87-120.
- Stanislavsky, C. (1936). *An actor prepares*. Translated from the Russian by E. Reynolds Hapgood. New York: Theatre Arts Books.
- Stanislavski, C., & Romyantsev, P. (1975). *Stanislavski on opera*. Translated from the Russian and edited by E. Reynolds Hapgood. New York: Theatre Arts Books.
- Stravinsky, I. (1936). *An autobiography*. New York: Simon and Schuster.
- Tarozzi Goldsmith, M. (1999). *The future of art: An aesthetics of the new and the sublime*. Albany, N. Y.: SUNY Albany Press.
- Tolstoy, L. (1869/1931). *War and peace*. Translated from the Russian by C. Garnett. New York: The Modern Library/Random House.
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46*, 35-57.

- Vaitl, D., Vehrs, W., & Sternagel, S. (1993). Prompts—Leitmotif—emotion: Play it again, Richard Wagner. In N. Birbaumer & A. Öhman (Eds.), *The structure of emotion: Psychophysiological, cognitive, and clinical aspects* (pp. 169-189). Seattle, WA: Hogrefe & Huber.
- Waterman, M. (1996). Emotional responses to music: Implicit and explicit effects in listeners and performers. *Psychology of Music, 24*, 53-67.
- Wilson, E. O. (1975). *Sociobiology: The new synthesis*. Cambridge, MA: Harvard University Press.
- Witvliet, C. V., & Vrana, S. R. (1996). The emotional impact of instrumental music on affect ratings, facial EMG, autonomic measures, and the startle reflex: Effects of valence and arousal. *Psychophysiology Supplement, 91*.
- Xinhua/Reuters (2004). The Great Wall getting less great. January 26.

Author Note

A longer version of this paper was presented as a plenary lecture at the Wuhan University Aesthetics Conference on “Beauty and the way of modern life,” Wuhan, China, May 2004.

Correspondence concerning this paper should be addressed to the author at:

Vladimir J. Konečni
Department of Psychology,
University of California, San Diego,
La Jolla, California 92093-0109.

E-mail: vkonecni@ucsd.edu