



# Cognitive Dissonance and the Performer's Inner Conflict: A New Perspective on the First Movement of Beethoven's Op. 101

Amanda Stringer Sauer



**KEYWORDS:** cognitive dissonance, embodiment, image schemata, performance analysis, Beethoven, Op. 101, Robert Hatten

**ABSTRACT:** Much of Beethoven's music—especially that of the late period—demands that the performer follow interpretive markings that seem to be musically counterintuitive. Conflict between the competing desires to follow musical intuition and to obey Beethoven's performance instructions creates psychological discomfort in the performer. Social psychologists refer to this phenomenon as “cognitive dissonance.” This article will examine the ways in which the first movement of Beethoven's Op. 101 piano sonata creates cognitive dissonance in the performer that is ultimately felt physically as well as mentally. In particular, the author revisits Robert Hatten's reading of the movement and offers an alternate interpretation that takes into account the performer's (as well as theorist's) experience with the music.

*Received May 2007*

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## Introduction

[1] At SMT's November, 2005 meeting in Cambridge, one of the Friday evening sessions was titled “Interacting Interpretive Roles—Performer and Theorist.” In the third and final presentation of the night, Robert Hatten worked with a bright, young string quartet of graduate students from New England Conservatory on the third movement (“Cavatina”) of Beethoven's Op. 130 quartet.<sup>(1)</sup> At the start of the session, Hatten told the audience that in fact we would not witness a formal presentation in the traditional sense, but would rather act as spectators for a coaching session. Hatten mentioned that he had practiced this same sort of coaching at his home institution of Indiana University as a guest in the chamber music class of violist Atar Arad. It was unclear from his opening remarks to what degree he believes his coachings differ from those of applied performance faculty.

[2] For the session, Hatten and the quartet worked on the first 27 measures of the movement, putting theory into practice by focusing on the “concept of plentitude” and other semiotic insights laid out in the in the eighth chapter of his book *Musical Meaning in Beethoven*.<sup>(2)</sup> His wish was a) to guide the quartet to play the passage in a way which reflected what was happening theoretically and rhetorically in the music, i.e. to demonstrate an early (measure 8) sense of fulfillment which, after this point, is not immediately achieved again, though the music actively searches for it, and b) to accomplish this by speaking to the performers in “plain language.” Hatten made it clear not only that had he never worked with the quartet of players, but that

the players themselves, while seasoned as an ensemble, had only begun working on the piece ten days earlier. In the context of a “before and after” format (the quartet was asked to play the 27-measure passage at the outset, and then at the conclusion of the session), Hatten asked leading questions of the players. The quartet’s answers to these questions ultimately generated a considerable amount of interpretive growth, reflected in the more logical, committed, and convincing “after” performance which ended the session.

[3] The first question asked after Hatten’s coaching was directed towards the performers: “What was it like to have *this kind* of coaching?” The question could have implied that “this kind” of coaching was worlds apart from what actually happens when professional performers (as opposed to theorists) lead this sort of educational experience, and though it might be argued that Hatten’s presentation, in fact, was *very much* like what happens when practicing musicians engage in ensemble coaching,<sup>(3)</sup> a more provocative question might have been, “What was it like to interpret *those kinds of musical gestures*?” A movement full of finicky articulative, gestural, and expressive markings cannot be interpretively easy to understand or physically easy to execute. Indeed, much of Beethoven’s music—especially that of the late period—demands a certain amount of “reprogramming” for the performer. This reprogramming is necessary because of the seemingly counterintuitive interpretive demands it makes upon the performer. In music of the common-practice era, the thwarting of expectation (and the concomitant building-up of tension) is a fundamental rhetorical and dramatic procedure, but rarely does it create a psychological conflict *in the performer* to the extent that it does in the late music of Beethoven. The competing desires to follow one’s own musical intuition and to obey Beethoven’s performance instructions are responsible for this psychological conflict.

[4] Most performers would agree that the psychological dissonance created by these conflicting desires is ultimately transferred to the body; like any stress, it is felt physically. Indeed, the idea that mental stress and other cognitive processes manifest themselves in the physical has been explored by medical researchers, social scientists, and musicians alike.<sup>(4)</sup> Because of this phenomenon, there is much more to the art of interpretation than some theorists recognize or are willing to address. While the reading of Op. 130 Hatten shared in his SMT presentation and the research of *Musical Meaning in Beethoven* are undoubtedly some of the most insightful to date, they do not take into account the performer’s mental and physical experience of “naturalizing” the music<sup>(5)</sup> (and how this experience affects the interpretation that is then relayed to the listener). But doing so might influence, if not change, the meaning of a piece.

[5] With this in mind, the following discussion of the first movement of the Op. 101 piano sonata will use Hatten’s work as a means by which to raise the question of what Beethoven’s music achieves, both on the sensual and intellectual level, by creating in the performer a sense of unease that psychologists call “cognitive dissonance.” Before moving into a discussion of cognitive dissonance, however, we will recall and reexamine Hatten’s interpretation of the movement, and will propose that current theories of embodiment and image schema provide a way of understanding musical norms/expectation.

### Hatten’s Reading: Op. 101 as a Pastoral Topic

[6] In *Musical Meaning*, Hatten devotes an entire chapter to discussing the “pastoral as fundamental topical premise” in Op. 101.<sup>(6)</sup> In the sonata, the first movement acts as a frame, governing the expressive genre of the entire sonata.<sup>(7)</sup> Typical pastoral features apparent in the movement are six-eight meter, pedal points (heard even in the first gesture), slow harmonic motion, simple melodic contour, contrary motion, rocking accompaniment, parallel thirds, consonant appoggiatura, elaborated resolution of dissonance, major mode, and quiet dynamics.<sup>(8)</sup> More interesting, though, as Hatten points out, is the way Beethoven contrasts the pastoral with “tragic irruptions [that] create dramatic moments of crisis.” The primary tragic climaxes occur in the middle of the development (measures 5–1) and in the transition to the coda (measures 85–87), and are characterized by great dynamic surges that are undercut by *subito piano* (measure 52) and decaying dynamics (measures 8–8) before attaining their climactic goals.<sup>(9)</sup>

[7] Examples of these undercuttings can be heard even in the short exposition of the movement (measures 1–33; see **Example 1**).<sup>(10)</sup> Indeed, they are one of the most salient features of the piece.

[8] We should notice first the avoidance of an authentic cadence until measure 25. The opening phrase of the movement (measures 1–4) sits on a dominant harmony that in the second, parallel phrase leads to a deceptive cadence (measures 5–6), and a second deceptive cadence is found at measure 16. Also notable are the struggle involved in reaching the cadence at measure 25—three stalled attempts between measures 19 to 24—and the way Beethoven never allows his pianist to gain any footing in this struggle: with respect to dynamics, each attempt begins where it started, at *piano*. Finally, it is important to acknowledge that once achieved, this hard-earned resolution is unconsummated, for the arrival on the dominant harmony

(measure 25) is marked *subito piano*.

[9] Hatten also identifies what he calls “yearning” in the passage, conveyed by the stepwise ascent of measures 7–9 (highlighted by a bass moving in contrary motion), which results not in resolution but deception (the weak-beat resolution of the leading tone, followed by an immediate leap downwards). Hatten claims that yearnings such as these should not climax, for their doing so “might either upset the self-established propriety of the movement or too decisively break its continuity.” Thus, these “yearnings” give way to “resignation,” and ultimately “the pastoral exerts its control . . . and the movement ends with a serenity that, in its registral extremes, invokes transcendence or spiritual grace.”<sup>(11)</sup>

[10] Much of Hatten’s analysis of Op. 130 offers a kind of insight into this difficult and elusive movement that could inspire marked musical growth among pianists, just as his on-site remarks did for the quartet members who participated in his SMT presentation.<sup>(12)</sup> Having said that, I believe that there are problems with Hatten’s analysis that stem from his failure to address the performer’s physical and mental experience with the music. Indeed, were he to acknowledge this important perspective in his analysis, he would find that the cognitive complexities of the sonata’s first movement suggest a different outcome than “resignation” or “spiritual grace,” for they create a psychological dissonance in the performer that is both disconcerting *and* meaningful. Specifically—and most importantly—the undercuttings that manifest themselves in *subito piano* markings at important cadential arrival points (the dominant harmonies at measure 24 and measure 76) are, in effect, instructions to the performer to fight musical convention or to do that which is seemingly counterintuitive. Ultimately, the interpretive difficulties of this movement, the struggle it wages against the performer’s expectation and instinct, generates for the pianist not a feeling of resignation, but rather one of dissatisfaction and even frustration. In other words, the struggles involved in interpreting the movement create physical as well as cognitive discomfort in the performer. These are not elements of “spiritual grace.”

### The Roles of Convention and Metaphor in Creating Musical Expectation

#### *Musical Convention: Expectation and Norms*

[11] Before moving into a discussion of dissonance theory as it applies to the first movement of Op. 101, one must ask the rather difficult question “What, for the performer, constitutes ‘counterintuitive’ in musical gesture and expression?” The issue raised by this question is separate from other problems the performer faces: virtuosic technical demands and/or the “unplayable” sometimes found in music. Technical passages, while presenting both physical and, on some level, cognitive problems, do not necessarily require the performer to grapple with issues of interpretation; a so-called “unplayable passage” on the other hand, presents *only* a problem of interpretation, as when composers deliberately write contradictory performance instructions. (An example is the third movement of Shostakovich’s eighth string quartet, where the violist is asked to play *con sordino* at a *ff* dynamic).

[12] Certainly the logical and aurally satisfying (i.e. expected) musical gesture is bound to the norms of any given style period, which are, in turn, defined in part by what happened in the preceding style period(s). Beethoven’s sonatas are no exception. Mozart’s and Haydn’s pieces of the same genre defined the expected modes of musical expression for these works (as has been catalogued masterfully by Ratner, Rosen, Rosenblum, and others).<sup>(13)</sup> That Haydn and Mozart, compared to Beethoven, wrote a fractional number of instructions for the performer does not negate the fact that a pianist in 1816 would have expected certain musical truths to be self-evident.

[13] The pastoral topic as variously embodied by Beethoven’s precursors helps to define what would have constituted “musical truth” for a pianist of his time. For example, the theme (and all but one of the subsequent variations) of the first movement of Mozart’s well-known piano sonata in A, K. 331 (see **Example 2**), instructs the keyboardist to play the final cadence (which ends the codetta) at a *forte* dynamic, strengthening the sense of closure.<sup>(14)</sup> There is also a stepwise ascent in the soprano in the penultimate measure, a gesture that Hatten characterizes as “yearning” in Op. 101.<sup>(15)</sup> Unlike Beethoven, Mozart allows this yearning to be satisfied. It should be noted that here, though the perfect authentic cadence in measure 8 is marked *piano* and directly follows a chord marked *sf*, it differs from Beethoven’s instructions in Op. 101 (i) in that it does not require the performer to suddenly back off of the final dominant harmony of the cadential figure.

[14] It is also instructive to consider, again, the exposition of Beethoven’s Op. 101 (i), and compare it to the previous example of Mozart. As many pianists have noted, none of the older composer’s piano sonatas demand that Vienna’s amateurs execute something as outrageously complicated as this passage of Beethoven’s. In addition to the “undercuttings,” an overwhelming number of musical instructions are indicated (see Example 1): six *p* markings, seven indications to either

*crescendo* or *diminuendo*, a *sforzando* in measure 24, complicated articulations in abundance, and Beethoven's dual indications 'Etwas lebhaft und mit der innigsten Empfindung' and 'espressivo e semplice.'

[15] By contrast, in his own, earlier exploration of the pastoral topic at the keyboard, Beethoven complies with the musical expectations passed down to him. Though the texture of Beethoven's Op. 28 (i) is richer than the texture of the theme of Mozart's K. 331 (i), leading to a less modest treatment of accent (*sforzando*) and syncopation, like Mozart he treats the important sectional cadences as goals, firmly marking them as arrival points (see **Example 3**).

[16] The three attempts to reach the section's goal—measures 21–27, measures 29–35, and measures 35–39—foreshadow the parallel structure of measures 18–25 in the exposition of Op. 101 (i), though here these attempts are “rewarded” with a *crescendo* beginning in measure 36 that, rather than suddenly (and surprisingly) backing off of the harmonic aim (the final V7 chord on beat 3 of measure 38) and creating a sense of frustrated expectation (as in Op. 101 (i)), sails through to a satisfactory conclusion.<sup>(16)</sup>

[17] *The major disparity between Beethoven's late sonata movement and the earlier ones lies not so much in their relative degrees of technical difficulty as in their respective degrees of cognitive complexity.* This complexity, moreover, created in large part by the composer's extensive overlay of performance instructions, presented the musicians of Beethoven's day with something new to their experience. What must it have taken for pianists of the time to internalize these performance instructions? And, once cognitive control was attained, how was their musical intuition challenged?

[18] Ultimately the significance of the multitudinous interpretive instructions Beethoven assigns in Op. 101 (i) lies not in their number, but in the fact that they ask performers of the movement to eschew musical convention. Time and time again, the feeling of forward motion and the progress toward harmonic goals are thwarted in the passage, and thus an “easy” sense of fulfillment is never granted the performer. The “undercuttings” and “yearnings” so perceptively identified by Hatten must be taken to heart by the pianist, and their execution requires a disciplined approach to this delicate and intricate music. The instinct of most pianists would be to mark the goal of closure in measures 24–25 with a strong, *forte* dynamic, with special emphasis on the dissonant V<sup>7</sup> triad of measure 24 (see **Example 4**), and I challenge Hatten's assessment that “with the third arpeggiation [measures 23–24], the gesture of yearning is permitted to climax and achieve completion, as confirmed by the first perfect authentic cadence of the movement.”<sup>(17)</sup> On the contrary, from the performer's perspective the cadence of measures 24–25 does not “confirm” a sense of climax and completion but rather *undermines* it. Hatten downplays the dynamic undercutting of the passage on grounds that it is “consistent with the thematic strategy of undercutting,”<sup>(18)</sup> a strategy he has previously called appropriate because it works to preserve “the self-established propriety” and “continuity” of the movement. What propriety would be upset with the following interpretation of the movement?

[19] One might even argue that this alternate interpretation *maintains* continuity rather than *breaks* it, and indeed, it is certainly easier for the pianist to execute, interpretively speaking, than what Beethoven wrote. Similarly, Beethoven demands complete physical control in the “yearning” stepwise ascent in measures 7–9, allowing the *crescendo* to reach only *mezzo f.*<sup>(19)</sup> On top of these denials, Beethoven adds all of the interpretive details mentioned earlier, a bombardment of information which produces anything but pastoral peace.

[20] Interestingly, in 1816, the same year Op. 101 was composed, Hummel wrote about the need for performers to experience their music deeply:

Expression relates immediately to the feelings and denotes in the player a capacity and facility of displaying by his performance, and urging to the heart of his audience, whatever the composer had addressed to the feelings in his production, and which the performer must feel after him. . . Expression may be awakened indeed but. . . it can neither be taught nor acquired; it dwells within the soul itself and must be transfused directly from it into the performance.<sup>(20)</sup>

To honor this dictum must have engendered some level of cognitive dissonance for 19th century interpreters of Beethoven. They are asked to feel “whatever the composer had addressed to the feelings” and thus fully engage the senses, though to do so in Op. 101 (i) would be to engage in conflict because the music requires, on some levels, a revamping of what it means to play instinctively. This need to revamp, in turn, creates a conceptual and physical challenge for the performer, raising questions about Beethoven's formal and psychological intent.

[21] Thus one wonders whether Beethoven meant for his pianists to feel this sense of incompleteness, longing, and frustrated desire. Could he have predicted that the challenge of understanding and internalizing his seemingly

counterintuitive gestures would create cognitive discomfort in future students of Op. 101 (i)?

[22] Turning to pastoral-style piano writing by later 19th century composers, we see some of the varied ways that expectation can be fulfilled by dynamic climax. While these examples possess the richly detailed expressive markings typical of the period, they still usually allow thematic material to consummate in climaxes. Chopin's treatment of cadence in the first eighteen bars of his *Barcarolle*, Op. 60, is an example (see **Example 5**).<sup>(21)</sup>

[23] The *crescendo* to the dominant harmony in measure 14 is a climactic moment, and waves of dissipation over eight long beats slowly release the tension generated by it. The next four bars (measures 17–20) constitute a sequential, transitional passage that tonicizes first B Major (measures 17–18) and then D $\sharp$  Minor (measures 19–20). In both of these 2-bar units, the dominant-to-tonic harmonic motion is intensified by *crescendo* markings. While these cadential arrivals are treated differently—in the cadence of measures 14–15 the tonic resolution is part of a decaying dynamic, and in the cadences of measures 17–18 and measures 19–20 the tonic resolution is part of an increasing one—both differ from Beethoven's cadential arrivals in Op. 101 (i). It is Beethoven's marking of *subito piano* on the arrival at the dominant (measure 24, measure 26) that the pianist finds particularly difficult to implement. Generally speaking, the pianist's instinct is to “lean” on the dissonant dominant chord of a perfect authentic cadence; when this is disallowed, musical instinct is frustrated.

[24] Schubert chooses the key of B $\flat$  Major for his pastoral topic, and though he doesn't specifically target cadence as a vehicle of psychological manipulation, he does create, for the pianist/listener, a desire for dynamic climax that parallels the one Beethoven creates in Op. 101 (i). The primary theme of the first movement of Schubert's sonata, D. 960, is conspicuously marked *pp* at its first three appearances (measures 1–9, measures 10–18, and measures 20–27 [in the key of  $\flat$  VI]), and these delicate, hushed (even suppressed) statements demand a physical and mental control that is similar to that demanded of the pianist in playing Beethoven's Op. 101 (i). Unlike Beethoven, however, Schubert provides a release for this dynamic control at the fourth appearance of the primary theme (measures 36–48), where the pianist is allowed to play the passage full-throttle. The *crescendo* leading to the cadence is marked *ff* as the music modulates to F $\sharp$  Minor (measures 46–48) (see **Example 6**).

[25] These passages help explain why, even post-1816, the pianist interpreting Op. 101 (i) might experience a struggle in reconciling musical intuition with Beethoven's demands. The common treatment of cadence (and, in the case of Schubert, the music enveloping the cadence) establishes—whether consciously or not—the expectation that in pastoral-genre keyboard music structurally important authentic cadences will be treated as arrivals. Moreover, in an otherwise tonally elusive work, the cadences of Op. 101 (i) play a crucial role in establishing tonic,<sup>(22)</sup> so when they are undercut the effect is emotionally intensified. When performers' musical expectations are challenged in this way, the physical (i.e. technical) and conceptual become conflated—interpretation becomes an issue of both body and mind.

### Schema Theory

[26] An explanation for why these musical expectations exist in the first place and how these expectations are connected to the body may be found in theories of embodiment and image schema. First presented by linguist George Lakoff and philosopher Mark Johnson in *Metaphors We Live By*, schema theory posits that cognition itself (our ordinary conceptual system) is fundamentally metaphorical and that metaphor is a “fundamental mode of understanding and meaning by which we project patterns from one domain of experience in order to structure a domain of a different kind.”<sup>(23)</sup> More specifically, through metaphor we conceptualize a typically unfamiliar or abstract domain—called a “target” domain—in terms of another, more familiar, concrete domain—a “source” domain.”<sup>(24)</sup>

[27] After *Metaphors*, Johnson expanded the theory of embodiment in *The Body in the Mind* to account for how humans conceive of source domains. He explained that this is possible because source domains spring from repeated patterns of bodily experience called *image schemata*. To clarify, Johnson's *kinesthetic image schemata*, those “recurring dynamic patterns of our perceptual interactions and motor programs that give coherence and structure to our experience,”<sup>(25)</sup> are *preconceptual* structures which function beneath the conceptual level and originate in the body.

[28] One can get a good sense of Johnson's argument by reading the Preface to *The Body in the Mind*, where he directly challenges what he calls traditional “Objectivist” accounts of meaning and rationality—those which disregard the “*humanness* (the human embodiment) of understanding”<sup>(26)</sup>—and instead champions an account that focuses on the *human body*, and especially those structures of imagination and understanding that emerge from our embodied experience.”<sup>(27)</sup> He writes:

The body has been ignored by Objectivism because it has been thought to introduce subjective elements

alleged to be irrelevant to the objective nature of meaning. The body has been ignored because reason has been thought to be abstract and transcendent, that is, not tied to any bodily aspects of human understanding. The body has been ignored because it seems to have no role in our reasoning about abstract subject matters.

Yet . . . the embodiment of human meaning and understanding manifests itself over and over, in ways intimately connected to forms of imaginative structuring and experience. The kind of imaginative structuring uncovered in [empirical studies that focus on phenomena where human understanding is required for an account of meaning and reason] does not involve romantic flights of fancy unfettered by, and transcending, our bodies; rather, they are forms of imagination that grow out of bodily experience, as it contributes to our understanding and guides our reasoning.<sup>(28)</sup>

He continues:

The centrality of human embodiment directly influences what and how things can be meaningful to us, the ways in which these meanings can be developed and articulated, the ways we are able to comprehend and reason about our experience, and the actions we take. Our reality is shaped by the patterns of our bodily movement, the contours of our spatial and temporal orientation, and the forms of our interaction with objects. It is never merely a matter of abstract conceptualizations and propositional judgments.<sup>(29)</sup>

[29] Music theorists have become particularly interested in how kinesthetic image schemata make it metaphorically possible to project a target domain onto a source domain, a cognitive pursuit called *cross-domain mapping*. Cross-domain mapping allows us to conceptualize aspects of musical experience in terms of concepts borrowed from other domains and, as Lawrence Zbikowski explains, allows us to “ground our descriptions of elusive musical phenomena in concepts derived from everyday experience”<sup>(30)</sup> (image schemata). Indeed, much of the application of schema theory to music explores how metaphorical conceptualization illuminates theories of music and helps “interpret recurrent tropes of musical understanding.”<sup>(31)</sup>

[30] To understand our attitudes and cognitions about the role of cadence in Beethoven’s Op. 101, therefore, we might first consider the metaphor PURPOSES ARE PHYSICAL GOALS, a source domain as identified by Johnson.<sup>(32)</sup> The metaphor derives from the PATH image schema. Johnson explains that “our lives are filled with paths that connect up our spatial world,” whether they be physical or imagined, and that every path has a source (or starting point), a goal (or ending point), and a sequence of contiguous locations connecting the source with the goal.<sup>(33)</sup> Because human beings have purposes in traversing paths, they tend to experience them as directional; therefore, the PATH schema grounds the metaphor PURPOSES ARE PHYSICAL GOALS.

[31] Diane Urista has shown how the PATH schema gives rise to a related conceptual metaphor in music: TONAL MUSIC IS GOAL-DIRECTED MOTION.<sup>(34)</sup> Indeed, it takes little effort to think of the many ways music theorists have mapped the musical concepts of “phrase” and “cadence” (not to mention larger tonal structures) onto the PATH schema. In discussing music of the common-practice era, we often speak of cadences in terms of “goals,” “arrivals,” “resting points,” and so on. Cadences occur at *completion* of the phrase and are the harmonic *goals* of phrases.<sup>(35)</sup> Furthermore, Urista explains, “one of the most pervasive entailments associated with the SOURCE-PATH-GOAL [PATH] schema is tension and release.”<sup>(36)</sup> Lerdahl and Jackendoff have shown that musical phrase is a goal-directed motion in which tension is increased as the event progresses towards its goal and that there is a sense of relaxation when the goal is attained,<sup>(37)</sup> and Urista posits that “when involved in attaining a purpose of some sort, we experience a wide range of psychological and emotional patterns of tension and release, such as a sense of unfulfillment-fulfillment, expectation-accomplishment, [and] desire-gratification. Psychological patterns of tension and release are embedded in numerous musical structures.”<sup>(38)</sup>

[32] These theories help explain why performers of Beethoven’s Op. 101 (i) find themselves psychologically conflicted at certain points of the movement, namely those points where cadences are undercut (measures 24–25 and measures 76–77). Experience and image schemata account for what, to musicians, feel like ingrained expectations (or musical conventions)—specifically the sense that cadences, especially those that are hard-earned and set up as distinct arrivals, will be fulfilled through dynamic climax. When this expectation is frustrated, psychological dissonance sets in.

[33] More specifically, in the learning stages of the work—in grappling with interpretive issues—different desires pull at the pianist: one to satisfy expectations so deeply ingrained that the performer experiences them as instinctive, the other to honor Beethoven’s intention. Therefore Op. 101 (i) challenges straightforward notions of musical intuition and norms. The process

of recognizing its interpretive difficulties, understanding their purpose in defining the meaning of the work, and naturalizing the language and syntax they employ creates a mental and physical challenge which is uncomfortable (and difficult) for the performer.

### The Theory of Cognitive Dissonance and Its Application to Op. 101

[34] Leon Festinger's theory of cognitive dissonance, first published in 1957, helped define the human need to achieve consistency among cognitions. A dissonance between two cognitions might exist because of what a person has learned or come to expect, or because of what is considered appropriate or usual, and this dissonance is psychologically unpleasant or aversive.<sup>(39)</sup> For instance, if musical intuition—governed by musical convention—instructs us to *crescendo* through a structurally important cadence, thus highlighting the arrival, and the music prescribes the opposite (as in measures 24–25 of Op. 101, i), we are faced with dissonant cognitions. Festinger describes his theory of dissonance in the following way:

The terms “dissonance” and “consonance” refer to relations that exist between pairs of “elements.” These elements refer to what has been called cognition, that is, the things a person knows about himself, about his behavior, and about his surroundings. These elements, then, are “knowledges,” if I may coin the plural form of the word. Some of these elements represent knowledges about oneself: what one does, what one feels, what one wants or desires, what one is, and the like. Other elements of knowledge concern the world in which one lives: what is where, what leads to what, what things are satisfying or painful or inconsequential or important, etc.

It is clear that the term “knowledge” has been used to include things to which the word does not ordinarily refer—for example, opinions. A person does not hold an opinion unless he thinks it is correct, and so, psychologically, it is not different from “knowledge.” The same is true of beliefs, values, or attitudes, which function as “knowledges.”<sup>(40)</sup>

He explains cognitive dissonance itself as follows:

For one reason or another, attempts to achieve consistency [among knowledges] may fail. The inconsistency then simply continues to exist. Under such circumstances—that is, in the presence of an inconsistency—there is psychological discomfort.<sup>(41)</sup>

[35] In Festinger's theory, dissonant cognitions such as those experienced when working on Op. 10 (i) would possibly motivate an attitude change.<sup>(42)</sup> Attitude changes may involve reducing the importance of the conflicting beliefs, acquiring new beliefs that change the formula of dissonance, or removing the conflicting attitude or behavior. The “acquiring [of] new beliefs that change the formula of dissonance” is precisely what happens when performers study, analyze and contextualize those gestures of Op. 101 (i) that initially seem counterintuitive. Specifically, this process of discovery eventually leads one to understand that the dynamic undercutting of cadences ultimately works in service to a higher goal of the piece—namely that of delayed gratification. It is my belief that Beethoven purposefully undercuts climaxes in the movement as a psychological ploy; he wishes his performers and listeners to sense the frustration of unconsummated climax. This phenomenon, therefore, is signposted as an issue to be dealt with later in the sonata as a whole.<sup>(43)</sup>

[36] It is for this reason, finally, that I disagree with Hatten's reading of the first movement, which claims that musical yearning ultimately “gives way to resignation.”<sup>(44)</sup> In addition to the marked moments of crisis heard in the development of the movement (measures 50–52) and at the end of the recapitulation (measures 85–87),<sup>(45)</sup> and the repeated undercuttings and yearnings of the expository material in the recapitulation, the last phrase of the movement reinforces the psychological frustration that pervades the movement in its entirety (see **Example 7**).

[37] Here Beethoven combines the two elements of yearning and undercutting: a stepwise ascent highlighted, as in measures 7–9, by the bass moving in contrary motion arrives at a cadence marked *piano*. Even in the final moments of the movement, pianists must back off of the cadential arrival and are forced to refrain from leaning (ever-so-slightly, of course, in deference to the unusually high register) on the dissonant dominant harmony. While aurally there may be a sense that the “pastoral exerts its control . . . and the movement ends with [a] serenity,”<sup>(46)</sup> this psychologically and thus physically frustrating manifestation of the pastoral topic leaves the performer not with a sense of serenity, but rather a sense of longing.

[38] A look at the subsequent movements of Op. 101 confirms that Beethoven purposely sought to challenge musical expectation and convention in the elusive opening one. Though we may never know whether the composer consciously

recognized the psychological frustration performers would meet in learning the piece, one thing seems certain: the issue of dynamically undercut cadences is ultimately one of delayed gratification, not of “resignation” and “spiritual grace” as Hatten posits. Both the second movement March and the return of the first movement’s pastoral opening measures before the finale resolve the “problem” of undercut climaxes presented in the first movement.

[39] For the performer, the formally and musically straightforward second movement is more *cognitively consonant* and more physically satisfying than the first. The reason for this is twofold: first, Beethoven casts the movement as a march, one of the most overtly physical of all genres. Indeed, as Solomon has written, Beethoven “[captures] the expressiveness of the human body by a magnified use of dance and march forms . . . (what Cooper calls a ‘transfigured play’ element) in [his] late works.”<sup>(47)</sup> This shift in focus from the pastoral/spiritual to the physical comes as an interpretive respite for the performer. Second, this straightforward march ends unequivocally on a perfect authentic cadence, written in resounding octaves and marked *forte* (see **Example 8**). Beethoven allows the performer to unleash all inhibition, playing with the freedom and abandon denied in the first movement. Because of the second movement’s interpretive accessibility, the performer immediately experiences a degree of comfort—a sense of *satisfaction*—in playing the movement that is not allowed in the first.<sup>(48)</sup>

[40] An even more important resolution comes, however, when the music of the work’s opening pastoral-style theme returns before the finale. Here, the psychological frustrations and longing of the first movement—caused by the dynamic undercutting of cadence—is finally dealt with head-on (see **Example 9**).

[41] When the pastoral theme returns, “[restoring] the topical field that governs the expressive genre as a whole,”<sup>(49)</sup> it behaves like a transition by connecting the third, *adagio* movement to the *allegro* finale. More significantly, though, there is a crucial point of resolution as a “cadential flourish on the dominant”<sup>(50)</sup> marked with a *crescendo* moves to the tonic A major chord, heralding the arrival of the finale. At this moment, the musical expectations thwarted throughout the first movement and suspended in the second are finally met, and we retrospectively understand at least one of Beethoven’s reasons for creating psychological frustration through the constant undercutting of climax.<sup>(51)</sup> For the performer, the gratification that accompanies this consummation is conceptual, psychological, and physical. Recognizing and understanding this sense of fulfillment affects greatly one’s interpretation and reading of the first movement.

[42] The central thesis of this article is that the most comprehensive reading of a piece takes into account not only the theorist’s (and listener’s) experience of the music, but also the performer’s, and this argument finds support in Zbikowski’s claim that “theories are the cognitive tools that guide the way we reason about the things we experience.”<sup>(52)</sup> Listeners, of course, whether they be academicians versed in theory or audience members whose only understanding of music is intuitive, experience music without having to consider the physical demands of performance.<sup>(53)</sup> Performers, however, necessarily cultivate a unique psychological and thus physical relationship with each piece of music they learn and play, and this relationship ultimately bears upon their understanding and interpretation, even after they have internalized every aspect of the music and have become co-conspirators with the composer. It is for this reason that I offer a reading of the first movement of Op. 101 that goes beyond Hatten’s exploration of the pastoral topic and in doing so underscores the importance of symbiosis between theorist and performer.

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Amanda Stringer Sauer  
Florida State University  
Visiting Assistant Professor  
College of Music  
Tallahassee, Florida 32306-1180  
[mstringersauer@mailier.fsu.edu](mailto:mstringersauer@mailier.fsu.edu)

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## Footnotes

1. The full title for this presentation was “The Theorist as Performer’s Coach: A Laboratory for Gestural and Rhetorical Interpretation in the Third Movement of Beethoven’s String Quartet in Bb, Op. 130.” For their helpful comments during the preparation of this article, I would like to thank Stefan Eckert, Michael Rogers, Evan Jones, Thomas Sauer, Timothy Koozin, David E. Cohen, and the *MTO* anonymous readers.

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2. Robert Hatten, *Musical Meaning in Beethoven* (Bloomington: Indiana University Press, 1994).

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3. This is true especially because Hatten chose to speak in supposed “non-technical” (his word) terms.

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4. For more on stress and its relation to coronary heart disease, see Robert Karasek and Tores Theorell, “Current Issues Relating to Psychosocial Job Strain and Cardiovascular Disease Research,” *Journal of Occupational Health Psychology*, Jan. 1(1) (1996): 9–26; for a summary of current research on the physiological and somatic ramifications of psychological dissonance, see Eddie Harmon-Jones, “A Cognitive Dissonance Theory Perspective on the Role of Emotion in the Maintenance and Change of Beliefs and Attitudes,” in *Emotions and Beliefs: How Feelings Influence Thoughts*, edited by Nico H. Frijda, Antony S. R. Manstead, and Sacha Bem (Cambridge: Cambridge University Press, 2000); for an excellent discussion of musical understanding and the moving body, see Diane Urista, “Embodying Music Theory: Image Schemas as Resources for Musical Concepts and Analysis, and as Tools for Expressive Performance” (Ph.D. diss., Columbia University, 2001), particularly Chapter 4.3, “Beyond Words: The Moving Body as a Tool for Expressive Performance.”

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5. For more on subjective experience and analysis, see Naomi Cumming, “The Subjectivities of ‘Erbarne Dich,’” *Music Analysis* 16, no. 1 (March 1997): 5–44; Catherine Costello Hirata, “The Sounds of Sounds Themselves: Analyzing the Early Music of Morton Feldman,” *Perspectives of New Music* 34, no. 1 (Winter 1996): 6–27; and Marion Guck, “Music Loving, or the Relationship with the Piece,” *Music Theory Online* 2.2 (March 1996).

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6. Hatten, *Musical Meaning*, 92.

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7. Ibid.

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8. Ibid., 97–99.

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9. Ibid., 96.

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10. Audio examples are performed by the author.

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11. Ibid., 92.

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12. I would argue that the success of Hatten’s analysis of Op. 101 is due in part to its verbal beauty; as a writer, his style—which is almost poetic—reflects the tone of Beethoven’s work itself. Therefore, his semiotic approach is enhanced by way of metaphor and word choice, which he uses to convey not only the meaning of but also the *tone* of a work. I believe that this, in part, accounts for the interpretive growth he is able to inspire in performers.

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13. See Leonard Ratner, *Classic Music: Expression, Form, and Style* (New York: Schirmer, 1980); Charles Rosen, *The Classical Style* (New York: W. W. Norton, 1972); and Sandra P. Rosenblum, *Performance Practices in Classical Piano Music* (Bloomington: Indiana University Press, 1991).

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14. A Major is also the key of Op. 101.

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15. Hatten, *Musical Meaning*, 100.

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16. In the emotionally weighty second movement of Op. 28 Beethoven uses *subito p* markings at cadential arrivals (as he does in Op. 101), while in the highly stylized—and therefore more objective—pastoral music of movements i and iv he does not. Interestingly, the earlier sonata uses undercutting as a specific and even extreme expressive device that stands in contrast to the pastoral topos, while Op. 101 *combines* undercutting and the Pastoral to create the interpretive difficulties discussed in this paper.

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17. Ibid.

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18. Ibid., 101.

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19. Another important example of this “control” demanded of the pianist can be seen in m. 52 of the development (one of Hatten’s “tragic irruptions”). Here Beethoven disallows the performer to “emotionally conclude” the angry outburst from mm. 50–52, writing a *subito piano* on the final chord of the gesture. While this sort of “suppressed” gesture is commonplace in Beethoven, it is significant that here it occurs on the *V* of *C# Minor*, undercutting yet another cadence.

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20. Hummel, J.N. *A Complete Theoretical and Practical Course of Instructions on the Art of Playing the Piano-Forte*, Part 3, Second Section, Chapter 1, “On Musical Performance in General” (London: Boosey and Co., reprinted from the English translation of 1829), 39.

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21. Written in 1845/1846.

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22. This is true whether it be the “new” tonic of the modulatory key of E Major or the home key of A Major.

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23. Summary found in Diane Urista’s “Embodying Music Theory: Image Schemas as Sources for Musical Concepts and Analysis, and as Tools for Expressive Performance” (Ph.D. diss., Columbia University, 2001), 13.

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24. For an example of how metaphors both influence and reflect human experience, consider the ways in which the concept “TIME IS MONEY” works its way into our language, reflecting the way Western culture has evolved to quantify time and view it as a commodity: one can “*waste* time,” “live on *borrowed* time,” “*lose* time,” “*spend* time,” “*budget* time,” and “*invest* time.” See George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980), 7–8.

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25. Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning Imagination, and Reason* (Chicago: University of Chicago Press, 1987), xiv.

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26. Johnson, *Body in the Mind*, x.

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27. Johnson, xvi.

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28. Ibid.

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29. Johnson, xix.

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30. Lawrence Zbikowski, *Conceptualizing Music: Cognitive Structure, Theory, and Analysis* (Oxford: Oxford University Press, 2002), 76.

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31. Ibid., vii.

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32. Johnson, *Body in Mind*, 112.

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33. Ibid., 113.

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34. Urista, “Embodying Music Theory,” 33–35.

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35. This is in large part because of Schenker’s influence on our current ways of theorizing about music. Urista discusses how the SOURCE-PATH-GOAL schema underlies much of Schenker’s theory, including the concept of linear progression (*Zug*) as a path that can be taken (*Weg*), or a motion along a path (*Durchgehen*); the *Ursatz* as goal-directed motion and one that should evoke a sense of *Spannung* and *Erfüllung* (striving and fulfillment/tension and release); the idea that *Urlinie-Zug* must always descend to tonic and come to a *complete rest*; and the idea that the *Bassbrechung* must rise to the fifth and *fall* to the root, reinforcing the effects of striving and fulfillment. Similarly, in the following passage from *Der freie Satz*, we witness the abstract metaphor LIFE IS A JOURNEY, also derived from the SOURCE-PATH GOAL schema: “Every linear progression shows the eternal shape of life—birth to death. The linear progression begins, lives its own existence in the passing tones, ceases when it has reached its goal—all as organic life itself.” (See Urista, “Embodying,” pp. 70–79.)

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36. Ibid., 37.

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37. Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge: MIT Press, 1983), 179.

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38. Urista, 37.

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39. See Leon Festinger, *A Theory of Cognitive Dissonance* (Stanford: Stanford University Press, 1957), 13.

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40. Ibid., 10.

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41. Ibid., 2.

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42. Today’s dissonance theorists disagree about the underlying motivation for dissonant effects, though most agree that cognitive dissonance does motivate change and that the source of this motivation is psychological discomfort. See Judson Mills and Eddie Harmon-Jones, editors, *Cognitive Dissonance: Progress On a Pivotal Theory in Social Psychology* (Washington, D.C.: American Psychological Association, 1999).

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43. Interestingly, research in the area of neuroeconomics has shown that two separate parts of the brain literally compete for control over behavior when humans attempt to balance near-term rewards with long-term goals. See Samuel M. McClure, David I. Laibson, George Loewenstein, and Jonathan D. Cohen, *Science* 306 (15 October 2004): 503–507.

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44. Hatten, 100.

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45. Ibid., 96.

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46. Ibid.

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47. Maynard Solomon, *Beethoven* (New York: Schirmer Books, 1998), 387; and Martin Cooper, *Beethoven: The Last Decade* (London: Oxford University Press, 1970), 133.

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48. Here “accessible” refers to the performer’s experience of learning, playing and interpreting the movement, not to the meaning of the movement within the context of the whole sonata. In other words, the demands of this movement are purely technical, not interpretive or conceptual.

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49. Hatten, 107.

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50. Ibid., 106.

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51. This is yet another way in which Beethoven shifts the weight of the sonata cycle to the finale, as he does in works such as Op. 102/2, Op. 106, Op. 109, Op. 110, Op. 125, Op. 130 *et al.*

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52. Zbikowski, 5.

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53. Having said this, I believe it is the performer’s responsibility to relay music’s complex theoretical processes—whether they be psychological, syntactical, or physical—to the listener, inspiring *kinesthetic listening*. For more on kinesthetic reactions, see David Lidov, “Mind and Body in Music,” *Semiotica* 66 I/3 (1987): 69–97.

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Prepared by Brent Yorgason, Managing Editor and Tahirih Motazedian, Editorial Assistant