

# TIME'S EFFECT ON THE MATERIAL\*

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## Abstract

"Time's effect on the Material" describes the process of comparing related passages in a piece of music to observe if anything has changed. If the passage is restored intact, it speaks to the music's stability and endurance. If it is transformed, then time has had an effect.

NOTE: Please note that you must have the most recent copy of Macromedia's Flash plugin installed to play the musical examples.

## 1 Time's Effect on the Material

In the classic cartoon, Road Runner and his nemesis, Wile E. Coyote, are marvels of endurance. No matter how violent their confrontations, both are impervious to harm. "Beep, beep"—and the two adversaries are ready to renew their struggle afresh. Time has no lasting effect on either of them.

Similarly, we rely on computer memory being absolute: no matter how we alter a document, unsaved it returns to its original form; our applications are intended to boot up intact. Movies and recordings create permanent records of otherwise perishable performances. Symbols and monuments such as the bald eagle and the Lincoln Memorial stand as enduring emblems of liberty. We turn to timeless spiritual ideas for consolation and inspiration.

But for so much else in our experience, time's force is perpetual and relentless: It is constantly chiseling away, creating new forms. Transformation may be sudden or slow, obvious or hidden, but it is inexorable. Cloud watching is a testimony to nature's restless inventiveness. "Planned obsolescence" is built into many consumer items. Living things are particularly vulnerable: Our bodies are in a continual state of transformation. Even human memory is not absolute, but a recreation that conjures up the past for us with inevitable distortions, evasions, substitutions and changing emphases. Try as we might to hold on to the past, it flees — that is a fundamental condition of living.

Whether time has an effect on the material is a crucial issue explored in a piece of music. Is the musical material able to recuperate itself exactly? Does it ever return in its original form? Or is it destined to be continually impermanent and volatile?

Oscar Wilde's *The Picture of Dorian Gray* is a powerful allegory about time's effect. The title character is able to hold off the ravages of time, outliving lovers, rivals and friends without the slightest hint of aging. His secret is a portrait, painted by a diabolical artist and kept hidden in a locked room. The portrait grows old in his stead, enabling Dorian Gray to survive unchanged. When the painting is finally discovered, its image has become horrifically decrepit and menacing. Once the painting has been destroyed, time's effect catches up with Dorian Gray: He is reduced to a pile of ash.

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When musical material returns with little or no change, it speaks to the material's persistence and durability. The material is not vulnerable to time: No matter what has happened in the interim, the music is able to reconstitute itself exactly. It is stable enough to endure. The longer the passage that is restored unchanged, the greater the effect of stability.

### Example 1

Bach's *Brandenburg Concerto No. 5* opens with a confident thematic statement by the orchestra.

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The movement gradually builds in intensity, culminating in a wild, flamboyant harpsichord solo.

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The harpsichord seems to bring the music to a precarious cliff, ready to fall off. But it rescues itself and leads back to a return of the main theme.

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In spite of the tension of the harpsichord solo, the music has managed to regain its equilibrium. Time has not caused lasting damage: in a moment of great affirmation, the opening music is reclaimed in its original form.

### Example 2

Stravinsky's *Elegy for JFK*, with text by W.H. Auden, offers a more unexpected and subtle example. The piece opens with the line of text, "When a just man dies,/Lamentation and praise/Sorrow and joy, are one."

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The music then continues with little exact repetition, in brief, haiku-like statements.

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At the work's close, Stravinsky reprises the opening line exactly.

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The musical return is striking; it adds an undeniable emphasis and a timeless quality to Stravinsky's eulogy. Framing the piece with the text repetition was the composer's decision; in Auden's manuscript, this line of text occurs only at the end.

Because music is a performance art, even an "exact" return is an idealization. On paper, the music's content may be identical. But even the most expert musician cannot precisely duplicate his or her performance identically; inevitably, there will be subtle variations.

Furthermore, you, the listener have changed. You have experienced the intervening music; just the fact that the return is already familiar, rather than something fresh, gives it a different quality. Viewing the fateful Game 6 of the 1986 World Series on videotape is not the same as seeing it the night it happened. The events may be identical, but they have a different significance when viewed in retrospect. Nevertheless, these nuances of performance and perception are subsumed within the identity of content and design. When a musical passage returns exactly, the emphasis is on the material's endurance and transcendence.

On the other hand, if the musical material returns with significant changes, then time has had an effect. The music is not stable enough to reconstitute itself exactly: It is evanescent, transitory, and elusive. It **participates** in time: the intervening action "weathers" the material, propelling it in new directions. It is a music of **becoming**, of irreversible change and progress.

### Example 3

Please listen to the opening of Ludwig van Beethoven's *Symphony No. 9*. The excerpt fades out at the arrival of a contrasting, more lyrical section.

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About five minutes later, this opening passage is reprised. The excerpt once again fades out at the arrival of the contrasting section.

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This time, time has had an effect: Instead of a gradual buildup, the return begins at once with the full orchestra at a very loud dynamic. The harmonic tension is intensified. Most interestingly, the return is **compressed**: It takes exactly half the amount of time as the original. This is an inescapable fact, verifiable by the clock. Yet many listeners, even professional musicians, do not recognize this consciously at first. This is the benefit of analysis: It helps make us more aware of what we are **all** hearing.

### Example 4

Morton Feldman's *Coptic Light* for orchestra begins with a static, very repetitive passage. Its sounds and musical rhetoric are far removed from Beethoven's.

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Nearly twenty minutes later, the opening is revisited.

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Once again, time has had an effect. At the reprise, the upper strings revive the two-note pattern that they played at the opening: This is what creates the impression of return. However, the winds originally played similar patterns to the strings. At the return, their music consists only of isolated single attacks. There is also a murmuring underlying rhythm that was not present at the opening. The overall result is of an incomplete reminiscence, because there are more disconnected attacks and “bubbling” activity underlying the upper strings.

## 2 Measuring Time’s Effect

### 2.1 Short-Term and Long-Term Returns

The distance between original and return is measured in the amount of intervening music. If hardly any music separates the related passages, the wait is parenthetical; if a great deal happens, the wait is more significant. Clock-time can be a helpful guide, but only in the context of the piece’s specific proportions: a minute is negligible in an opera, but nearly a lifetime in a bagatelle.

If the wait is long and the changes are subtle, progress is occurring very gradually.

If, on the other hand, the wait is brief and the changes are dramatic, the material is particularly volatile. The more volatile the material, the less likely that it will ever be recuperated in its original form.

#### Example 5

For instance, consider the opening of Beethoven’s *Bagatelle*, opus 126, no. 1. The main theme is presented. It is then immediately repeated in its entirety. The repetition is embellished: it is more rhythmically active and reaches higher in register. Change is immediate, making the repetition more dynamic and progressive.

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Compare the Beethoven to the following passage from Igor Stravinsky’s *Rite of Spring*. In the excerpt, a ruminative melody is presented. Then, after a short wait, the melody returns.

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Once again, the transformed version follows closely on the heels of the original. In this case, the changes are almost cataclysmic! The theme is presented more boldly and in a higher register. The texture is ferocious and agitated, with rapid rhythmic figuration and more complex, strident harmony.

In both the Beethoven and the Stravinsky, the volatility of the material is a signal that it will never be recovered in its original form. Local impermanence makes large-scale stability less plausible. If a musical idea is so restless that it can barely “hold onto itself” when it is immediately repeated, it makes it less likely that the music will ever be able to recuperate itself exactly.

When the original passage and its return are further apart, time's effect may be a reflection of the original's inherent stability or volatility. But it also reflects the power of the intervening music to leave its mark. In *The Odyssey*, Ulysses' tribulations and love affairs do not mar his triumphant reunion with his family: He is able to reclaim his wife and son. On the other hand, experience is not so kind to King Lear. During the play's first scene, he banishes his most faithful daughter, Cordelia. They are eventually reunited. But the catastrophic events that have occurred in the interim cannot be undone: His beloved daughter dies in his arms.

### Example 6

The second movement of Schubert's *Double Cello Quintet* opens with a spare, nearly motionless texture. Melody and harmony move patiently and deliberately.

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This section is followed by a strongly contrasting B-section, which is far more agitated and turbulent. The rhythmic motion is dramatically intensified.

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Then, the opening section returns. The harmonic progression is identical to the original; the inner voices replay the original melody. However, the cello and upper violin add a more active commentary. The troubled rhythmic intensity introduced during the B-section "bleeds" into the A-section's return, preventing the music from recovering its original stillness. Time has had an effect: the A-section has "absorbed" the influence of the B-section.

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### Example 7

As another example, listen to the opening of Bartok's *Music for Strings, Percussion and Celeste*. The violas, alone, present the movements main theme.

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The movement builds to a powerful climax that reaches its peak with the powerful repetition of a single note. The main theme is then broken into fragments and flipped upside down. These reflections have the quality of mysterious reminiscences.

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Near the work's close, the music returns to its starting point, and the violas present the theme in its original form.

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However, time has had an effect! The theme is not presented in isolation: This time, it is combined with its own mirror image, played in the high violins. Because of the high register, the "upside down" version nearly masks the violas; you have to listen very carefully to hear the original theme. The return is also accompanied by rapid figuration in the celeste, which is playing for the first time. Finally, there is sustained harmony, played in **tremolo**. As in the Schubert, the transformations recollect and summarize the intervening music: For instance, as was illustrated above, the inverted version of the theme was introduced at the climax. Significant events have left their mark; the music's history is reflected in the changes that have occurred.

In the Brandenburg example (Example 1), the harpsichord solo is immensely exciting when it is happening; but the later music is able to "set aside" this fiery solo. It is part of the history of the piece; but it does not have a lasting effect. In contrast, in the Schubert and Bartok examples above, the intervening passages leave an audible legacy; they are not so easily dispelled.

To dramatize the fact that the opening has returned with significant new features, it is conventional to label the return as **A'** (A-prime). Thus, the form of the Schubert would be described as A-B-A'. In a movement with multiple transformed returns, they may be labeled as **A'**, **A''** (double-prime), *etc.* When appropriate, the return of any section (**B'**, **C'**, *etc.*) may be marked in this way.

## 2.2 Detailing What Has Changed

With carefully directed listening, it is often possible to quantify and describe the changes that have occurred just by ear. A comparison of related passages may be broken down into detailed and carefully directed questions: Are the registers similar or different? What about the texture? The rhythmic surface? Have the melody or harmony been altered? Are the same instruments playing?

### Exercise 1

(*Solution on p. 13.*)

For instance, compare the opening of the second movement of Beethoven's *Piano Concerto No. 5, Emperor*, with its restatement later in the movement. Then, mark which of the indicated features have changed. Listen to the examples as many times as you need to in order be confident of your answers.

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(select all that apply)

- a) The melody is being played by a different instrument
- b) The melody is embellished and elaborated upon.
- c) The melody is in a higher register.
- d) The rhythmic accompaniment is new.

### Exercise 2

(Solution on p. 13.)

Next, compare these related passages from Pierre Boulez's orchestral work, *Rituel: In Memoriam Bruno Maderna*. Mark which of the indicated features have changed.

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(select all that apply)

- a) The texture is thicker, with a greater variety of instruments and new percussion sounds.
- b) The oboe's line is more discontinuous; it is now broken into segments that are spaced farther apart.
- c) Sporadic rapid rhythmic figurations have been added.

### Example 8

One crucial issue to examine is whether the return is abbreviated or expanded. When the return is abbreviated, it can contribute to making the music more dynamic, more active. The return is more efficient, it has been reduced to an essence.

For instance, Brahms' *Intermezzo in A-Major* opens with the following lyrical section:

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After a contrasting section, the A-section recurs in abbreviated fashion.

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### Example 9

The third movement of Francis Poulenc's *Flute Sonata* dramatically compresses its return. The opening of the piece unfolds with a luxurious panorama of ideas, beginning with energetic figuration played by the flute and piano and culminating in a more languorous theme introduced by the piano alone.

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At the return, Poulenc presents a dizzying synopsis that rushes quickly through the contrasting ideas: The energetic figuration and languorous theme now occur much closer together.

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From a structural point-of-view, the result is very dynamic and lively.

### **Example 10**

Compare these examples with Wagner's *Siegfried's Death and Funeral March*, in which the theme is expanded when it returns. If the reprise is both expanded and presented with great stability, it creates a particularly emphatic and conclusive sense of arrival.

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## **2.3 Interpreting Time's Effect**

If transformations have occurred, one way to interpret them is to consider whether time has strengthened or weakened the material.

### **Example 11**

The opening of Franz Schubert's *Symphony No. 9, "The Great,"* begins with a French horn playing alone.

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At the end of the work, the entire orchestra plays the theme, powerfully strengthening the return.

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**Example 12**

In Arnold Schoenberg's *A Survivor from Warsaw*, the narrator recalls witnessing Jewish prisoners being led away to their deaths. As he describes how the condemned started to sing, a disjunct melody is played quietly by a muted horn.

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Later in the work, the narrator's retelling becomes more immediate and detailed. As he describes the prisoners' final march, the muted horn's melody returns—this time sung forcefully by men's chorus and prolonged into a complete prayer. Time has strengthened the material, giving it an overwhelming emotional impact.

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In Samuel Beckett's play *Krapp's Last Tape*, a bumbling, mysterious old man revisits scenes from his life by replaying autobiographical tapes he made when he was younger. His idealistic, assured younger self is juxtaposed against the hopeless, hapless relic that he has become. The play is an analog to the type of analysis we have been describing: Past Krapp and present Krapp are presented side-by-side, so that time's effect becomes palpable. In the case of poor Krapp, time has weakened him.

**Example 13**

Time can also weaken musical material. The Scherzo of Ludwig van Beethoven's *Symphony No. 5* begins with a forceful French horn melody.

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Later, this passage returns. But instead of strengthening it, time has weakened the material. Now it is played delicately by the winds, supported by plucked strings:

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**Example 14**

In Arnold Schoenberg's *Verklarte Nacht* is an instrumental work inspired by a poem by Richard Dehmel. The poem tells the story of a woman who confesses to her lover that she is carrying another man's child. The man's shock and distress is represented by the following theme.

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At the poem's close, the man tells the woman he will love the child as his own. In the music, this is represented by the return of the impassioned theme. But time has had an effect: Only fragments are played, softly in the high register.

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### Exercise 3

(Solution on p. 13.)

As the above examples indicate, time's effect on the material is central to music's dramatic thrust. Near the beginning of the musical Camelot, King Arthur sings of his idyllic kingdom.

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During the course of the story, Arthur's reign is undone: His bride, Guinevere, abandons him for Lancelot, his most trusted Knight. The Round Table collapses; Arthur's vision of peace and prosperity is ruined. Near the musical's close, Arthur visits a monastery where Guinevere lies dying. At her bedside, he sings a refrain of his earlier song. Sit for a moment at the desk of composer Alan Jay Lerner: Would you strengthen or weaken the material?

(select one)

- Strengthen the material at Guinevere's bedside.
- After everything that has happened, weaken the material.

## 3 Recognizing Time's Effect

In Alexander Dumas' classic tale *The Count of Monte Cristo*, the hero Edmund Dantes is an unsophisticated commoner, unjustly imprisoned. During his brutal incarceration, he befriends a fellow inmate, who secretly teaches him the skills of the nobility, and eventually shares with him the location of a secret treasure. Dantes escapes, finds the treasure, and transforms himself into a Count with extraordinary wealth. When he returns home, neither his beloved nor his enemies recognize him—the effects of time have been too pronounced.

A musical return may be similarly disguised. If most of the qualities of the original are preserved, recognition of a reprise is within the reach of an alert listener. But if the transformations are extreme—if only a shadow of the original is preserved—then time's effect may be so overpowering as to make recognition very difficult.

### Example 15

Listen to Beethoven's *Bagatelle*, opus 126, no.1 in its entirety. As you will recall, the movement opens with a lyrical theme, which is immediately repeated with more embellishments. Does the main theme ever return at all? If so where and how?

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The melody does return: it is played in the bass.

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However, many of the opening's original features have been modified: the melody is in a much lower register; faster rhythmic values predominate in the accompaniment; the harmony is different. Rather than being strongly articulated, the reprise is obscured by the radical transformations that have taken place.

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### Example 16

Similarly, in Schoenberg's *Piano Piece*, opus 33a, the refrain of the opening may be hard to grasp:

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The pitch patterns at the opening and in the piano's right hand at the return are exactly the same. But many of the opening's defining features have changed: the opening is made up strictly of chords; at the reprise, there are still chords, but are broken, creating a more rhythmically fluid surface. The texture is also thickened: the left hand is playing an independent part. The register is expanded. Though the opening is being recuperated, the novelties make the recognition challenging.

Disguising the return makes the music inherently more open-ended and dynamic. The music does not acknowledge its return, but rather maintains its uninterrupted development. Instead of a sense of circling back to a familiar place, the music offers a particularly forceful sense of progress.

## 4 Conclusion

When you go to a class reunion, you are not there just to recognize old classmates. You are there to see whether time “has been good to them.” Who has aged, who remains youthful? Who has fulfilled the ambitions of their youth, who has faced greater disappointment or veered off in unexpected directions? One classmate remains as straight-laced as ever. Another has gone from being a businessman to being an organic farmer. You mill about the crowd, analyzing time's effect in all its dazzling variety and potency.

Similarly, when listening to music, identifying the return of a familiar passage is not enough. Evaluating whether the passage is restored intact or has changed is crucial to understanding the significance and poetry of the return. The possibilities range from time having no effect whatsoever—the music is restored intact, exactly in its original form—to time's effect being so powerful and the transformations so extreme that the original passage is barely recognizable.

Time's effect may be sudden or gradual. It may render the music more secure or more unsettled, more refined or more elaborate, more delicate or more forceful, compressed or expanded. Through careful hearing and comparison of related passages, it is possible to carry an aural analysis quite far. The progression from analysis to interpretation may work both ways. You may begin with a more immediate, intuitive reaction, and then examine the music carefully to understand its cause. Or, you may begin with a collection of observations, which then yield a more comprehensive conclusion. Across styles, eras and cultures, time's effect on the material may be the single most crucial feature of music.

## Solutions to Exercises in this Module

### Solution to Exercise (p. 6)

All are true!

### Solution to Exercise (p. 7)

- a) The texture is thicker, with a greater variety of instruments and new percussion sounds.  
( *The oboe is joined by other sections of the orchestra, which anticipate and echo it. The added percussion is particularly noticeable.* )
- b) The oboe's line is more discontinuous; it is now broken into segments that are spaced farther apart.  
( *The oboe's line is made up of a characteristic short-long figure. When the oboe was alone, its line progressed uninterrupted. Now, each short-line gesture becomes an "island" unto itself, surrounded by commentaries from the other instruments. Thus, the oboe's line is more discontinuous.* )
- c) Sporadic rapid rhythmic figurations have been added.  
( *Whereas the oboe line included single grace-notes, the refrain includes sporadic, rapid rhythmic figurations.* )

Again, all are true.

### Solution to Exercise (p. 10)

- b) After everything that has happened, weaken the material.

## 1

Here is Arthur's refrain:

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This time, Arthur speaks rather than sings. The melody is played in the background. The music is slower, with a less insistent beat. Time has weakened the material.

## Glossary

### Definition 1: tremolo

The rapid repetition of a single note or the rapid alternation between several notes.