Expert Pianists’ Stylistic Assessment of Musical Notation from Brief Glances

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Abstract

The original aim of our study was to find out whether a brief exposure (500 ms) to notated musical excerpts would allow competent musicians to make reliable stylistic assessments concerning the music. The first analysis of the data let us understand that such assessment is indeed possible and participants would even be able to name the correct composer of the extract. Next we wanted to inquire into the thought processes involved in this quick recognition — how the participants came to the conclusion of their assessment. By comparing answers including correct and incorrect recognition of the composer, we found that answers including the recognition of composer appeared to occur without less analytical talk (statements concerning pitch and texture) than in cases in which composer was not recognized. Also the mean response time in correct answers was shorter than in incorrect answers. This suggests that the recognition of composers happens intuitively and holistically rather than through analytical reasoning.

Method

Participants. 25 pianists, professionally educated in the classical tradition. Mean age of 29.6 years (sd = 8.8).

Stimuli and Procedure.

- 9 visual stimuli: Score extracts from the keyboard works of J. S. Bach, Beethoven, and Chopin (shown on the screen in the exact size of the physical score).
- Each score extract appeared for 500 ms.
- Upon seeing the stimulus, the participant was asked to “describe in your own words everything that you had time to perceive in the notated example,” and to assess the stylistic period that the example represented.
- The spoken responses (N = 225) were transcribed from video recordings, and coded (see the coding scheme below).

Table 1. Basic coding scheme for participants’ responses.

<table>
<thead>
<tr>
<th>Type</th>
<th>Categories of recognition (judged for accurateness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Style period</td>
</tr>
<tr>
<td>2</td>
<td>Composer</td>
</tr>
<tr>
<td>3</td>
<td>Composition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Categories of content (not judged for accurateness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pitch</td>
</tr>
<tr>
<td>2</td>
<td>Time</td>
</tr>
<tr>
<td>3</td>
<td>Texture</td>
</tr>
<tr>
<td>4</td>
<td>Type</td>
</tr>
<tr>
<td>5</td>
<td>Experience</td>
</tr>
</tbody>
</table>

Results

Multivariate logistic regression was used to compare the semantic contents of “recognition strings”—strings of codes appearing before the correct recognition of Composer—and the contents of “non-recognition strings” (truncated to match the average length of the recognition strings):

- Originally, we set out to examine the recognition of Style period. We could not find significant differences between the recognition strings and non-recognition strings.
- When Style period was examined as a category of content (instead of recognition) and the focus was turned to the recognition of Composer, we found out that statements concerning Pitch (p < .001) and Texture (p < .01) were more frequent when Composer was not recognized (31.5% and 35.8%, respectively) than when such recognition did take place (11.7% and 26.7%).
- Statements concerning Style period (p < .05) appeared somewhat more often before the recognition of Composer (23.3%) than in other cases (12.7%).

We also analyzed the response time for Composer recognition:

- The mean response time for the correct recognitions was 19.9 s (sd = 21.0)
- The mean response time for the incorrect recognitions was 32.0 s (sd = 24.4)
- According to a Welch unpaired t-test, the difference is significant (t = -2.40., df = 86.52, p < .05).

Discussion

Correct recognition of Composer appeared to occur (i) with less “content talk” than in cases of non-recognition, and (ii) in less time than incorrect recognition. This suggests that correct recognitions of Composer were done in an intuitive manner. We offer two possible interpretations for these results:

1. The Pitch and Texture talk appearing in non-recognition strings might suggest “verbal overshadowing” in which a recently generated verbal representation is emphasized at the expense of the perceptual memory itself (Schouler & Engstler-Schoeller, 1990). Note, however, that there was “as much talk” in the recognition and the non-recognition strings. It was not talk as such, but the detailed, music-analytical talk that tended to precede unsuccessful recognition attempts—thus perhaps impeding recognition (cf. Ambady, 2010).

2. Alternatively, one might suggest that detailed music-analytical talk is simply not needed in cases of holistic recognition. It is only when no holistic judgment of compositional style is forthcoming that the participants would have resorted to accounting for analytical details.

References


