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## Integration of phonetic and graphic features in poetic text categorization judgements<sup>1</sup>

David Hanauer \*

*The School of Education, Tel-Aviv University, Ramat-Aviv, P.O.B. 39040, IL-69978, Tel-Aviv, Israel*

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### Abstract

The experiments reported in this paper deal with the relationship between specific formal textual features, i.e. graphic and phonetic information, and the reader's literary educational background in the categorization of poetic texts. In two experiments, the research method of Information Integration Theory was employed in order to test two hypotheses relating to the radical conventionalist and traditional positions on the role of specific formal textual features in the categorization of poetic texts. Twenty subjects from expert or novice literary reading experience backgrounds were, in two experiments, required to rate two parallel sets of graphically and phonetically manipulated poems. The results reveal that subjects are sensitive to the manipulations of graphic and phonetic information and use the same additive information integration rule in making poetic text categorization judgements. The expert literary readers were found to assign significantly higher ratings to all versions of the manipulated poems than the novice readers.

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### 1. General introduction

A basic assumption of literary and poetic text processing models is that the activation point of the model is a decision that the text in front of the reader is of a literary type (Hanauer, 1994; Hoffstaedter, 1987; Meutsch and Schmidt, 1985; Schmidt, 1982; Schaubert and Spolsky, 1986; Zwaan, 1991, 1993). In other words, these models specify that the reader at an initial stage will make a categorization judgement about the genre of the text. However, within the field of literary studies, the issue of how a literary or poetic text categorization judgement is made, is one

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\* E-mail: davidha@ccsg.tau.ac.il; Tel.: +972-3-6407112 (work), +972-3-6410137 (home); Fax: 972-3-6409477.

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of contention. In broad terms two opposing positions have been taken in relation to this question: a traditional and a conventionalist approach. The traditional approach gives a central role to the formal features of the text in making a literary or poetic text categorization judgement (Garvin, 1964; Leech, 1969; Van Peer, 1992). In contrast, supporters of the conventionalist position argue that it is untenable to use formal textual features as a way of defining literary genre because the same formal textual features appear in many different text types (Culler, 1975; Fish, 1980; Pratt, 1977). They propose that literature be defined according to the conventions of reading that are applied during the reading process. From this perspective, formal textual features have only a very limited role in making a literary or poetic text categorization judgement. This position has been termed radical conventionalist by Zwaan (1993).

Within the context of an empirical approach to literature, previous research has produced some initial evidence indicating that both formal textual features and external factors may play a role in the categorization of literary and poetic texts (Hoffstaedter, 1987; Van Peer, 1990; Zwaan, 1991, 1993). In a recent study, Hanauer (1995) investigated the conventionalist and traditional approaches to the use of formal textual features in the categorization of literary and poetic texts. In this study, subjects that were, grouped according to their literary educational level, were asked to categorize as literary and poetic texts a set of authentic materials. In relation to the literary text categorization judgement the results supported the conventionalist position in that the same texts were categorized differently by subjects with different literary educational backgrounds. However, in relation to the poetic text categorization judgements ambiguous results were obtained which could support either the conventionalist or traditional positions. Thus, although empirical literary studies have produced some initial evidence relating to the issue of how literary or poetic texts are categorized, the central question of the role of formal textual features in this judgement still remains unclear. The aim of this current study is to investigate the role of formal textual features and literary educational background in the categorization of poetic texts.

## **2. General design of study**

In accordance with the approaches outlined above two contrasting hypotheses in relation to the role of formal textual features and the effect of literary educational background on literary and poetic text categorization judgements can be formulated:

- (a) Perception of formal textual features, and thus their role in making literary and poetic categorization judgements, is shaped by the reader's understanding of his/her situational context as defined by her/his literary educational background (radical conventionalist position).
- (b) Perception of formal textual features dominates the reader's understanding of his/her situational context and thus the formal textual features play a determinate role in literary and poetic text categorization judgements beyond the reader's literary educational background (traditional position).

In order to test the above hypotheses, a study was designed which required subjects from different literary educational backgrounds to make poetic text categorization judgements on a set of poems in which specific formal textual features had been manipulated; but no situational context was specified. In this experimental context, the above hypotheses can be seen to make different predictions. From the viewpoint of the radical conventionalist position, the way the formal textual features are used should differ between readers with different literary educational levels. Empirically, this difference should manifest itself by the presence of significant differences between groups of readers with different literary educational levels, in the categorization of the various manipulated versions of the poems. From the viewpoint of the traditional position, since the formal textual features should have a determinate role in making poetic text categorization judgements, the way the formal textual features are used should not be affected by the reader's literary educational background. Empirically, this situation should manifest itself by the absence of significant differences between groups of readers with different literary educational levels, in the categorization of the various manipulated versions of the poems.

Previous research has indicated that phonetic and graphic features are salient for the definition and categorization of poetic texts (Hanauer, 1995; Leech, 1969; Van Peer, 1986, 1990); thus these two specific formal textual features were the features that were manipulated. In order to further consider the way these formal features are used by readers from different educational literary backgrounds in the categorization of poetic texts, a research method that focuses on the way information is integrated was employed. This research method, Information Integration Theory (IIT) and its methodological counterpart, Functional Measurement (Anderson, 1981, 1982) were used in this study.

### **3. Information Integration Theory and Functional Measurement**

Information Integration Theory (IIT) is based on the assumption that "... all thought and behavior has multiple causes being integrated resultants of multiple sources of stimulus information" (Anderson, 1981: 80). In other words, this theory considers people to be integrators of stimulus information and each judgement that a person makes to be the result of an integration of multiple information sources.

In the IIT model the integration of stimulus information into a judgement is presented as involving three component functions: a valuation function, an integration function and a response function (Anderson, 1981, 1982). The valuation function involves the processes which transform the physical stimulus into its psychological representation. The integration function involves the processes by which separate pieces of information are combined. The response function involves the transformation of the implicit response into the observable response. The whole of this process has been graphically presented as in Fig. 1.

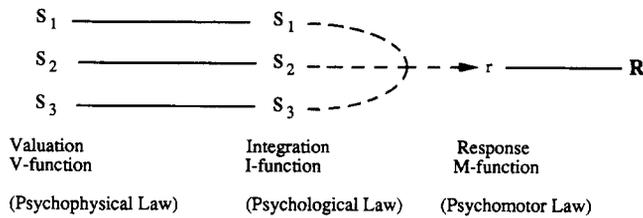


Fig. 1. (Anderson, 1982: 4).

Central to Information Integration Theory and Functional Measurement are the concepts of algebraic integration rules and the expression of the integration process on linear scales. Functional measurement is directly concerned with the integration function. This function which is conceived as relating psychophysical stimuli to their psychological responses, is described as having a simple algebraic form, such as addition, subtraction, averaging, multiplication or division. These algebraic rules indicate the way the stimuli are combined to produce a unitary response.

Within this framework a linear scale is used to express the integration process as a numerical response. The scale is used in conjunction with an integration task and is considered to reflect the three stages of the integration process. The type of algebraic rule used by the subject is defined by descriptive and inferential statistical analyses of ratings of each individual subject and of groups of subjects.

IIT and Functional Measurement have been used to investigate a wide variety of phenomena. In most cases the tasks and research designs used have three common characteristics: (1) Each subject judges a complete set of stimulus combinations; (2) The set of stimulus combinations is constructed from a factorial design in which the stimulus items are under experimental control; and (3) The response is a rating on a rating scale on which the end response categories correspond to the lower and upper ends of the range of stimuli. The rating given while using a scale of this type is considered a comparative judgement in which the subjective value of the given stimulus is compared to the values of the two end anchors.

Although this research method has been used in several psycholinguistic studies relating to text processing (Oden and Anderson, 1974; Rueckl and Oden, 1986; Walters and Wolf, 1992; Wolf et al., 1989), this study is the first application of IIT to the investigation of literary processing. As a research method for investigating the role of formal textual features in the categorization of poetic texts, IIT has one central advantage. IIT is a research method that empirically investigates the way that multiple sources of information are integrated into a specific judgement and as such it allows statements to be made relating to the hypotheses of this current study. Within the framework of IIT and Functional Measurement, it is possible to determine whether phonetic and graphic information have a role in the categoriza-

tion of poetic texts and, if so, how this information is integrated by subjects from different literary educational backgrounds. In other words, this research method allows statements to be made in relation to the use of the formal textual features by the readers from different literary educational levels. According to the conventionalist hypothesis, the way the graphic and phonetic information is integrated should depend on the reader's literary educational level and therefore different integration patterns should be found between groups of readers with different literary educational levels. On the other hand, according to the traditional hypothesis the same pattern of integration should be found between readers with different literary educational levels. In this study, two experiments using the research method of IIT and Functional Measurement were conducted. Experiments 1 and 2, which were replications of one another using two different stimulus sets, examined the way graphic and phonetic features were integrated by groups of readers with different literary educational levels in making a poetic text categorization judgement.

### *3.1. Experiment 1*

#### *3.1.1. Subjects*

Twenty subjects divided into two groups according to literary educational background took part in this experiment. Group 1 consisted of ten novice readers of poetry. The subjects of this group were all first year university students who had taken only one or two introductory literature courses. Group 2 consisted of ten experienced readers of poetry. The subjects of this group all had completed M.A.s or B.A.s in English Literature. All subjects were students in English Departments at the time of the study and had complied with the English language entry level requirements.

#### *3.1.2. Materials*

The stimulus texts for this experiment were based on an original poem: 'The Twilight Turns from Amethyst' by James Joyce. This poem was chosen because of its graphic form – three stanzas consisting of four short lines each – and its multiple use of phonetic patterns – alliteration, consonance, assonance and rhyme. In its original form this poem was judged by four experienced readers to have high phonetic and high graphic features. The manipulations of this poem consisted of three levels of graphic salience – high, middle and low – and three manipulations of the phonetic patterns of the text – high, middle and low salience. The following definitions were used: high graphic – 3 stanzas of four short lines each with capital letters at the beginning of each line; middle graphic – 1 stanza of 12 lines with capital letters only at the beginning of a sentence; low graphic – a paragraph form with four letter spaces between sentences and capital letters only at the beginning of a sentence; high phonetic – alliteration, consonance, assonance and rhyme; middle phonetic – alliteration, consonance and assonance; and low phonetic –

consonance and assonance. The following  $3 \times 3$  factorial combination of stimulus texts resulted:

| High phonetic | Middle phonetic | Low phonetic |              |
|---------------|-----------------|--------------|--------------|
| X             | X               | X            | High graphic |
| X             | X               | X            | Mid graphic  |
| X             | X               | X            | Low graphic  |

A total of nine stimulus items was used for this study (see Appendix A).

### 3.1.3. Elicitation tasks

Each subject was asked to perform the following two tasks:

- (a) To complete a general questionnaire relating to their general education, their literary education and their involvement with poetry and literature.
- (b) To read each text and make a categorization judgement on an unmarked 10 cm rating scale about the extent to which the text is “clearly a poem”.

### 3.1.4. Procedure

This experiment was conducted with each subject in an individual session. Following completion of the general questionnaire and the reading of the instructions, each subject was given two example texts to read. The first text was marked as “CLEARLY A POEM” (the far right of the rating scale) and the second text was marked as “NOT A POEM AT ALL” (the far left of the rating scale). Following this, the subject was presented with two booklets each consisting of the nine versions of the poem. The complete set of nine stimulus texts was randomly mixed in each booklet. The subject was asked to read each text out loud and then make a categorization judgement by marking an X at an appropriate point on the 10 cm rating scale. The subjects gave ratings for both booklets at the same session. Following Anderson (1982), the first set of nine ratings was considered a warm-up and only the data from the last nine judgements were considered in the results.

### 3.1.5. Results and discussion

Figs. 2 and 3 present the results of the poetic text categorization judgement for two literary educational levels and nine graphically and phonetically manipulated texts. The poetic text categorization judgement on the Y-axis is charted as a function of low, mid and high phonetic information on the X-axis. The individual curves represent the low, mid and high graphic information.

A visual analysis of the graphs in Figs. 2 and 3 reveals that both phonetic and graphic information were taken into account when making a poetic text categorization judgement. This can be seen by the slope of the curves which indicates that the various levels of phonetic information were assigned different values and the distance between the curves which indicates that the various levels of graphic information were assigned different values. The curves can be seen to form a

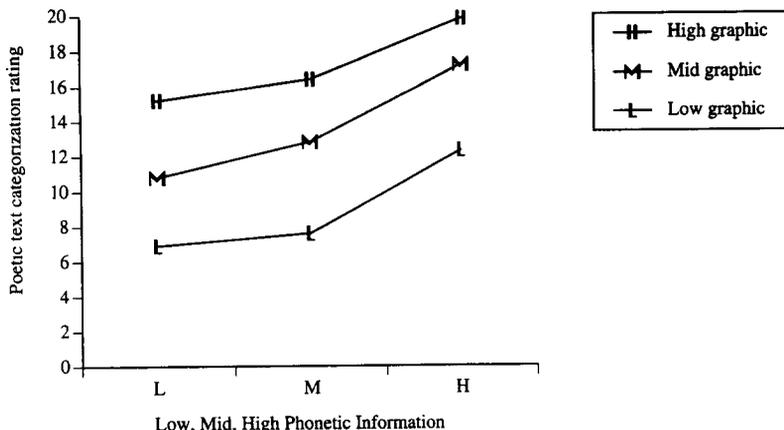


Fig. 2. Mean poetic text categorization ratings for nine graphically and phonetically manipulated texts for novice readers ( $N = 10$ ) in Experiment 1.

parallel pattern (Anderson, 1981, 1982). Such parallelism is indicative of an additive rule of the integration of the graphic and phonetic information. This means that assignment of value to one piece of information (either phonetic or graphic) is not affected by the value assigned to the other piece of information and that the overall value assigned to the categorization rating of the manipulated text is the result of the combined scores of both individual information sources.

A comparison of the graphs in Figs. 2 and 3 reveals that literary educational level also has an effect on poetic text categorization judgements. Although a parallel pattern is found in the graphs in both figures, the curves in Fig. 3 exhibit a more restricted range with reduced slopes and smaller distances between the curves than the graph in Fig. 2.

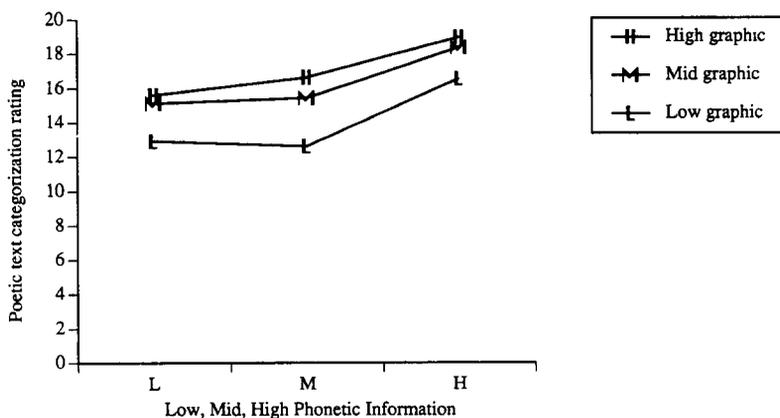


Fig. 3. Mean poetic text categorization ratings for nine graphically and phonetically manipulated texts for expert readers ( $N = 10$ ) in Experiment 1.

Table 1

Summary table for three-way analysis of variance for phonetic information, graphic information and literary educational level in Experiment 1 ( $N = 20$ )

| Text manipulation          | Mean poetic text categorization ratings |        |
|----------------------------|---|--------|
|                            | Novice                                  | Expert |
| High graphic/high phonetic | 19.8                                    | 18.9   |
| High graphic/mid phonetic  | 16.4                                    | 16.6   |
| High graphic/low phonetic  | 15.2                                    | 15.6   |
| Mid graphic/high phonetic  | 17.2                                    | 18.3   |
| Mid graphic/mid phonetic   | 12.8                                    | 15.4   |
| Mid graphic/low phonetic   | 10.8                                    | 15.1   |
| Low graphic/high phonetic  | 12.3                                    | 16.5   |
| Low graphic/mid phonetic   | 7.6                                     | 12.6   |
| Low graphic/low phonetic   | 6.9                                     | 12.9   |

| Source of variation | Sum of squares | DF  | Variance estimate | F     | P      |
|---------------------|----------------|-----|-------------------|-------|--------|
| Phonetic            | 657.35         | 2   | 328.67            | 26.29 | < 0.01 |
| Graphic             | 969.81         | 2   | 484.90            | 38.79 | < 0.01 |
| Literary background | 293.89         | 1   | 293.89            | 23.51 | < 0.01 |
| P × G               | 12.82          | 4   | 3.21              | 0.25  | > 0.05 |
| P × LB              | 32.07          | 2   | 16.04             | 1.28  | > 0.05 |
| G × LB              | 203.08         | 2   | 101.54            | 8.12  | < 0.01 |
| P × G × LB          | 5.76           | 4   | 1.43              | 0.11  | > 0.05 |
| Within cells        | 2052.2         | 162 | 12.50             |       |        |
| Total               | 4226.98        | 179 |                   |       |        |

A three-way ANOVA for group means on the poetic text categorization judgement for two literary educational levels and nine graphically and phonetically manipulated texts confirms the above visual analysis. As can be seen in Table 1 main effects were found for all three variables: phonetic information,  $F(2,162) = 26.29$ ,  $p < 0.01$ , graphic information,  $F(2,162) = 38.79$ ,  $p < 0.01$ , and literary educational background,  $F(1,162) = 23.51$ ,  $p < 0.01$ . In addition, an interaction was found between the graphic information and literary educational level,  $F(2,162) = 8.12$ ,  $p < 0.01$ . No interactions were found between phonetic and graphic information,  $F(4,162) = 0.25$ ,  $p > 0.05$ , or between phonetic information and literary educational level,  $F(2,162) = 1.28$ ,  $p > 0.05$ . No three-way interaction was found between the phonetic information, graphic information and literary educational level,  $F(4,162) = 0.11$ ,  $p > 0.05$ .

The results of Experiment 1 show a role for the phonetic and graphic information and literary educational level in making a poetic text categorization judgement. As can be seen in the group means in Table 1, the higher the level of graphic and phonetic information the higher the categorization rating that was obtained. As can be seen in the group means of the two educational levels in Table 1, the expert readers gave significantly higher categorization judgements than the novice readers. These results support the conventionalist position that the role of

the formal textual features depends on the literary educational level of the reader in that the same formal textual features were given higher values by the expert readers. The interaction between literary educational level and graphic information also supports the conventionalist hypothesis in that the graphic information was used differently by readers from the two literary educational levels. The novice readers gave a wider range of values for the graphic information than the expert readers.

However, the overall rule of integration used by both groups of readers was the same. Both the novice and expert groups of subjects used an additive rule of integration for the graphic and phonetic information in making a poetry categorization judgement. This result supports the traditional hypothesis in that the way the formal textual features are integrated is equivalent between the groups.

The results of this study reveal a situation in which both novice and expert literary readers were found to be sensitive to the use of graphic and phonetic information in making poetry categorization judgements and that these information sources were integrated in a similar way. However, the expert literary readers have a more inclusive category of poetic texts. Specifically, the expert readers accept a wider set of formal textual features as characteristic of poetic texts. As seen in Table 1, the specific text manipulations of low graphic/low phonetic and low graphic/mid phonetic were below the midway point on a scale defined from "NOT A POEM AT ALL" to "CLEARLY A POEM" for the novice readers, whereas for the expert readers all texts were above this midway point. The implications of these results are that while the underlying mechanism of integration may stay constant through a literary education, what changes is the value assigned to the information sources used within the integration process.

#### 4. Experiment 2

Experiment 2 was intended to address the external validity of the data by replicating the design of Experiment 1 with another set of poems. The same subjects, elicitation task and procedure were used. The stimulus texts for this experiment were based on an original poem: 'On the Beach at Fontana' by James Joyce. This poem was chosen because of its graphic form – three stanzas consisting of four short lines each – and its multiple use of phonetic patterns – alliteration, consonance, assonance and rhyme. In its original form this poem was judged by four experienced readers to have high phonetic and high graphic features. The manipulations of this poem consisted of three levels of graphic salience – high, middle and low – and three manipulations of the phonetic patterns of the text – high, middle and low salience. The same kind of graphic and phonetic manipulations as in Experiment 1 were made to the original poem and the same  $3 \times 3$  factorial design resulted.

##### 4.1. Results and discussion

Figs. 4 and 5 present the results of the poetic text categorization judgement for two literary educational levels and nine graphically and phonetically manipulated

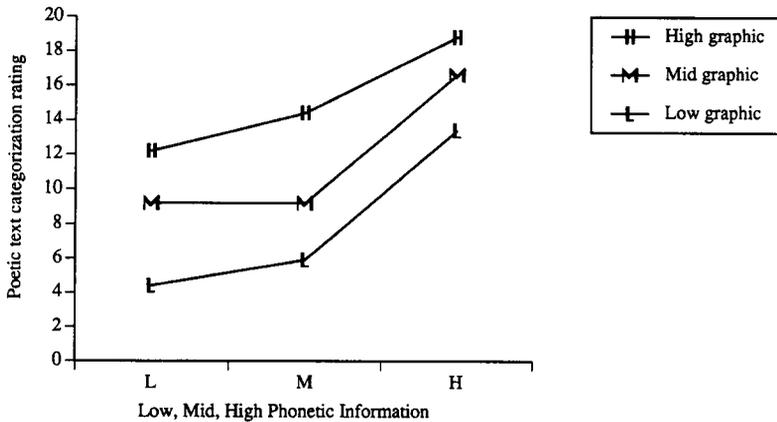


Fig. 4. Mean poetic text categorization ratings for nine graphically and phonetically manipulated texts for novice readers ( $N = 10$ ) in Experiment 2.

texts. As in Figs. 2 and 3, the poetic text categorization judgement on the Y-axis is charted as a function of low, mid and high phonetic information on the X-axis. The individual curves represent the low, mid and high graphic information.

A visual analysis of the graphs in Figs. 4 and 5 reveals that both phonetic and graphic information were taken into account when making a poetic text categorization judgement. This result replicates the results of Experiment 1. The curves in both figures, once again, form a parallel pattern which is indicative of an additive rule for the integration of the graphic and phonetic information. This means that the value assigned to either the graphic or phonetic information did not affect the value assigned to the other piece of information and that the overall value assigned to the categorization rating of the manipulated text is the result of the combined scores of both individual information sources.

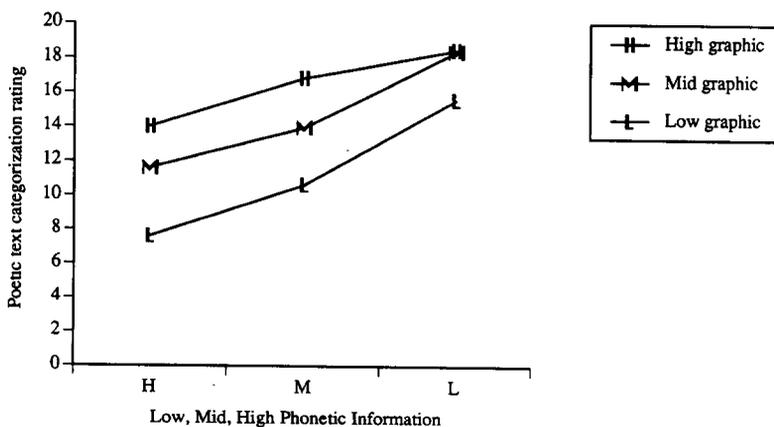


Fig. 5. Mean poetic text categorization ratings for nine graphically and phonetically manipulated texts for expert readers ( $N = 10$ ) in Experiment 2.

Table 2

Summary table for three-way analysis of variance for phonetic information, graphic information and literary educational level in Experiment 2 ( $N = 20$ )

| Text manipulation          | Mean poetic text categorization ratings |        |
|----------------------------|---|--------|
|                            | Novice                                  | Expert |
| High graphic/high phonetic | 18.8                                    | 18.4   |
| High graphic/mid phonetic  | 14.4                                    | 16.8   |
| High graphic/low phonetic  | 12.2                                    | 14.0   |
| Mid graphic/high phonetic  | 16.6                                    | 18.3   |
| Mid graphic/mid phonetic   | 9.2                                     | 13.9   |
| Mid graphic/low phonetic   | 9.2                                     | 11.6   |
| Low graphic/high phonetic  | 13.4                                    | 15.5   |
| Low graphic/mid phonetic   | 5.9                                     | 10.6   |
| Low graphic/low phonetic   | 4.4                                     | 7.6    |

| Source of variation | Sum of squares | DF  | Variance estimate | F     | P      |
|---------------------|----------------|-----|-------------------|-------|--------|
| Phonetic            | 1564.05        | 2   | 782.02            | 57.97 | < 0.01 |
| Graphic             | 1161.92        | 2   | 580.96            | 43.06 | < 0.01 |
| Literary background | 283.76         | 1   | 283.76            | 21.03 | < 0.01 |
| P × G               | 77.55          | 4   | 19.38             | 1.43  | > 0.05 |
| P × LB              | 58.84          | 2   | 29.42             | 2.18  | > 0.05 |
| G × LB              | 36.04          | 2   | 18.02             | 1.33  | > 0.05 |
| P × G × LB          | 4.56           | 4   | 1.14              | 0.08  | > 0.05 |
| Within cells        | 2185.6         | 162 | 13.49             |       |        |
| Total               | 5372.32        | 179 |                   |       |        |

As in Experiment 1, a comparison of the graphs in Figs. 4 and 5 reveals that literary educational level also has an effect on poetic text categorization judgements. A parallel pattern is found in the graphs in both figures, but the curves in Fig. 5 exhibit a more restricted range with smaller distances between the curves than the graph in Fig. 4.

A three-way ANOVA for group means on the poetic text categorization judgement for two literary educational levels and nine graphically and phonetically manipulated texts confirms the above visual analysis. As can be seen in Table 2, main effects were found for all three variables: phonetic information,  $F(2,162) = 57.97$ ,  $p < 0.01$ , graphic information,  $F(2,162) = 43.06$ ,  $p < 0.01$ , and literary educational background,  $F(1,162) = 21.03$ ,  $p < 0.01$ . In contrast to Experiment 1, no interaction was found between the graphic information and literary educational level,  $F(2,162) = 1.33$ ,  $p > 0.05$ . No interactions were found between phonetic and graphic information,  $F(4,162) = 1.43$ ,  $p > 0.05$ , or between phonetic information and literary educational level,  $F(2,162) = 2.18$ ,  $p > 0.05$ . No three-way interaction was found between the phonetic information, graphic information and literary educational level,  $F(4,162) = 0.08$ ,  $p > 0.05$ .

The results of Experiment 2 to a large extent replicate the results of Experiment 1 and show a clear role for the phonetic and graphic information and literary

educational background in making a poetic text categorization judgement. As can be seen in the group means of the two educational levels in Table 2, the expert readers gave higher categorization judgements than the novice readers. These results support the conventionalist position in that the same formal textual features were given higher values by the expert readers. As in Experiment 1, both groups of readers used the same additive integration rule in making their poetic text categorization judgements.

## **5. General discussion**

In sum, the results of both Experiment 1 and Experiment 2 reveal a complex relationship between formal textual features and the reader's literary educational background in the categorization of poetic texts. Both novice and expert readers were found to be very sensitive to the manipulations of the phonetic and graphic information and accordingly to alter their categorization judgements in accordance with the changes to the texts. This result reveals an important role for the formal textual features. In addition, within the framework of IIT and Functional Measurement, the phonetic and graphic information in the group graphs in both experiments and for both educational levels was seen to form the same parallel pattern. This is indicative of an additive rule of integration for the graphic and phonetic information in the poetic text categorization judgement. This result supports the traditional hypothesis in that the way the information sources were integrated was the same for both literary educational groups.

However, in support of the conventionalist hypothesis, the group means for the expert readers were found to be consistently and significantly higher than those of the novice readers. Thus, although the same pattern of parallel curves indicative of an additive rule of integration was found for both educational levels, the experts assigned the same formal textual features a higher value than the novice readers. In addition, for the first Experiment an interaction was found between graphic information and educational level, indicating that this information was used differently by the two educational levels.

The overall picture revealed by this study is one in which formal textual features have a significant role in the categorization of poetic texts; however, this role is situated within the context of the reader's literary background. While sensitivity to formal textual features and the way to integrate this information may stay constant, the value assigned to these textual features was seen to change according to literary educational background. An increase in the value assigned to the graphic and phonetic information generated a more inclusive set of texts that were categorized as poems.

## **6. Methodological issues**

This current study raises several methodological issues that need further discussion. In accordance with the research method of IIT and Functional Measurement,

the research design involved the production of eight manipulated versions of an original poem and the repeated categorization of all the versions of the text. This situation may be considered artificial in that it is rare within the field of literary studies to conduct such a task.<sup>2</sup> The result of such a task is the conscious awareness of the categorization decision. This situation does not change the interpretation of the results; however, it may be beneficial to conduct a less controlled experiment to validate these results under more natural conditions. An additional issue that arises from the design of the study relates to the manipulations of the texts themselves. The purpose of the text manipulations was to vary the type of phonetic and graphic information in the poetic text. For the graphic information this was achieved by changing the physical format of the text; for the phonetic information this was achieved by replacing high phonetic words with mid or low phonetic words with similar semantic content. However, when a word is replaced it is not just the phonetic qualities of the word that change. Thus, in the present set of text manipulations some low frequency words (such as “amethyst”) were replaced by relatively high frequency words (such as “purple”). As previous research has shown that unusual or infrequent textual features enhance foregrounding in poetic texts and may be a defining feature of such texts (Van Peer, 1986), the use of high frequency words may reduce the poetic text categorization rating given. Thus, the conclusions reached relating to the phonetic information may have to be taken cautiously. However, this does not change the overall conclusions about the relationship between formal textual features and literary educational background for the categorization of poetic texts since the changes to graphic information did not include any word changes.

Finally, the issue of individual versus group data within the framework of IIT must be considered. The group data for two educational levels and for both experiments involved a pattern of parallelisms which is indicative of an additive integration rule for the phonetic and graphic information. A consideration of the individual graphs for all subjects in both experiments reveals that a much wider range of patterns was produced by the individual subjects. Table 3 summarizes the frequency of individual pattern types for the two educational levels.

The data from the individual subjects suggests that a multiplication rule may be used as well as an addition rule for the integration of the phonetic and graphic information in the categorization of poetic texts. As can be seen in Table 3, the frequency of individual pattern types is very similar between the expert and novice literary readers. Accordingly, this result which is based on a visual analysis of the data alone, does not change the previously reported result that literary educational level does not affect the integration rule that is used. In order to further consider this result an individual within-subjects design should be employed that involves a

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<sup>2</sup> As pointed out above, this is a rare situation; however, it is not a non-existent one. The reading of post-modern poetry quite often makes the reader encounter texts that are difficult to categorize and are subtle variations of previous texts (McHale, 1987).

Table 3

Frequencies of pattern types for categorization judgements of texts manipulated phonetically and graphically by individual novice ( $N = 20$ ) and experienced readers ( $N = 20$ )

| Pattern type                       | Frequency |        |
|------------------------------------|-----------|--------|
|                                    | Novice    | Expert |
| <i>(Addition rule)</i>             |           |        |
| Parallel curves                    | 3         | 2      |
| <i>(Single information source)</i> |           |        |
| Parallel curves/single slope       | 4         | 5      |
| <i>(Multiplication rule)</i>       |           |        |
| Fanning curves                     | 13        | 13     |

series of three or more repetitions of the poetic text categorization judgement on the same set of materials.

## 7. Concluding remarks

Van Peer (1995), in a recent theoretical discussion has argued that the theory of “literariness” which gives a central role to formal literary devices in the definition of literature has been wrongly discarded by modern literary theory. Van Peer’s argument rests on the analysis of the counterexamples presented by those theorists who support the radical conventionalist position and deny formal textual features a role in the definition of literature. In its most general formulation, this study, by focusing on both the role of specific formal textual features and the reader’s literary educational background in the categorization of poetic texts, presents within the context of the field of literary studies some empirical evidence with which to evaluate the theory of literariness and the contentious issue of the role of formal textual features in literary text categorization. Specifically, what this study reveals is that formal textual features were found to have a significant role in the categorization of poetic texts; however, this role was situated within the context of the reader’s literary background. Thus, the “literariness” argument becomes an argument over the degree to which formal textual features determine the categorization of literary texts. In the case of poetry categorization judgements, formal textual features can be seen to have an important but not determinative role in the categorization of poems.

## Appendix A: Stimulus items (Experiment 1)

### 1.1.A. (*high phonetic / high graphic*)

The twilight turns from amethyst  
 To deep and deeper blue,  
 The lamp fills with a pale green glow  
 The trees of the avenue.

The old piano plays an air,  
Sedate and slow and gay;

*1.1.B. (high phonetic / mid graphic)*

The twilight turns from amethyst  
to deep and deeper blue,  
the lamp fills with a pale green glow  
the trees of the avenue.  
The old piano plays an air,  
sedate and slow and gay;

*1.1.C (high phonetic / low graphic)*

The twilight turns from amethyst to deep and deeper blue, the lamp fills with a pale green glow the trees of the avenue. The old piano plays an air, sedate and slow and gay;

*1.2.A. (mid phonetic / high graphic)*

The twilight turns from purple  
To deep and deeper blue,  
The lamp fills with a pale green glow  
The trees of the street.

The old piano plays an air,  
Sedate and slow and joyful;

*1.2.B. (mid phonetic / mid graphic)*

The twilight turns from purple  
to deep and deeper blue,  
the lamp fills with a pale green glow  
the trees of the street.  
The old piano plays an air,  
sedate and slow and joyful;

*1.2.C. (mid phonetic / low graphic)*

The twilight turns from purple to deep and deeper blue, the lamp fills with a pale green glow the trees of the street. The old piano plays an air, sedate and slow and joyful;

*1.3.A. (low phonetic / high graphic)*

The twilight changes from purple  
To deep and darker blue,  
The lamp fills with a faint glow  
The trees of the street.

The aged piano creates an air,  
 Quiet and slow and joyful;

*1.3.B. (low phonetic / mid graphic)*

The twilight changes from purple  
 to deep and darker blue,  
 the lamp fills with a faint glow  
 the trees of the street.  
 The aged piano creates an air,  
 quiet and slow and joyful;

*1.3.C. (low phonetic / low graphic)*

The twilight changes from purple to deep and darker blue, the lamp fills with a  
 faint glow the trees of the street. The aged piano creates an air, quiet and slow  
 and joyful;

**Appendix B: Stimulus items (Experiment 2)**

*2.1.A. (high phonetic / high graphic)*

Wind whines, and whines the shingle,  
 The crazy pierstakes groan;  
 A senile sea numbers each single  
 Slimesilvered stone.

From whining wind and colder  
 Grey sea I wrap him warm  
 And touch his trembling fineboned shoulder  
 And boyish arm.

Around us fear, descending  
 Darkness of fear above  
 And in my heart how deep unending  
 Ache of love!

*2.1.B. (high phonetic / mid graphic)*

Wind whines, and whines the shingle,  
 the crazy pierstakes groan;  
 a senile sea numbers each single  
 slimesilvered stone.  
 From whining wind and colder  
 grey sea I wrap him warm  
 and touch his trembling fineboned shoulder  
 and boyish arm.

Around us fear, descending  
 darkness of fear above  
 and in my heart how deep unending  
 ache of love!

2.1.C. (*high phonetic / low graphic*)

Wind whines, and whines the shingle,      the crazy pierstakes groan;      a senile sea  
 numbers each single      slimesilvered stone.

2.2.A. (*mid phonetic / high graphic*)

Wind whines, and whines the stones,  
 The crazy pierstakes murmur;  
 A senile sea numbers each single  
 Slimesilvered rock.

2.2.B. (*mid phonetic / mid graphic*)

Wind whines, and whines the stones,  
 the crazy pierstakes murmur;  
 a senile sea numbers each single  
 slimesilvered rock.

2.2.C. (*mid phonetic / low graphic*)

Wind whines, and whines the stones,  
 the crazy pierstakes murmur;  
 a senile sea numbers each single  
 slimesilvered rock.

2.3.A. (*low phonetic / high graphic*)

Wind shouts, and cry the stones,  
 The crazy pierstakes murmur;  
 An old sea numbers each single  
 Wet gray rock.

2.3.B. (*low phonetic / mid graphic*)

Wind shouts, and cry the stones,  
 the crazy pierstakes murmur;  
 an old sea numbers each single  
 wet gray rock.

2.3.C. (*low phonetic / low graphic*)

Wind shouts, and cry the stones,      the crazy pierstakes murmur;      an old sea  
 numbers each single      wet gray rock.

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