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ABSTRACT

CREATIVITY AND IMAGE PERCEPTION: ANALYSIS OF RESPONSES TO TWO TYPES OF QUESTIONS

by Vi Marie Taylor

This study compares student responses to two forms of questions about literary selections to test whether it is possible to design objective questions that can detect certain factors related to creative thought. The theoretical framework posits that thought patterns of many creative individuals are rich in imagery and symbolic processes. In written responses it is possible to note reactions to images, symbolism, and meaning. These responses also make possible the observation of characteristics common to these individuals: openness, independence of judgment, expression of humor and violence, and freedom from stereotype, rigidity, and convention. These factors are used as indications of the subjects' originality and for comparison with objective questions designed to reveal response patterns of this sample of creative students to questions about literary images.

The questions used in the study are based on ten literary selections. The subjects, 294 eighth-grade students in two year groups of the same junior high school, were asked to respond to the selections by means of written answers

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to open-end questions, followed by multiple-choice questions over the same material. Written responses were divided into categories on the basis of fact and creativity, and the categories thus derived were compared with the students' answers on the multiple-choice form. Chi-square analyses were used to compare the two forms of the questions and to observe the effect of taking the long form on responses to the objective form. Responses were also used to select high creative, high intelligence, and high creative-high intelligence subjects; the responses of these three groups to the objective questions are analyzed separately and in comparison with the responses of the total group.

Responses to each of the eighty-one individual questions are compared by chi-square techniques with quartile designations of scores on the California Test of Mental Maturity and of scores on the three reading sections of the Stanford Achievement Test. Anticipated associations are found between some sections of these instruments and questions about literal, connotative, and denotative meaning. Some questions based on tallies of images also show associations with some of the test variables, possibly because of the desire of the highly intelligent student to give the "best" answer. Most purely imagistic responses are not significantly associated with quartile designations of the standardized scores, indicating that some factors other than reading ability and intelligence are operant.

On objective questions based on image perception, statistically significant differences are found between the high creative and high creative-high intelligence groups and the total test population; these differences are greater than are differences between the high intelligence group and the total test population.

Findings of the study may be summarized as:

1. Creativity, as measured by the questions used in this study, is a factor distinct from reading skills and intelligence, as these facets are measured by standardized tests.
2. Image perception can be employed, in conjunction with other characteristics of creative individuals, to identify creative factors among responses of eighth grade students to literary stimuli.
3. By comparison of the two forms of the questions, it is possible to select multiple-choice questions employing imagistic analysis to measure creative factors. Implications for construction of other items are also drawn from the study of the two forms.
4. Those identified as high creative and high creative-high intelligence give answers to some objective questions about imagery that are different from answers given by the total population. In many cases, answers to the same questions by the third

group, high intelligence eighth graders, are not significantly different from the answers of the total test population. The most discriminating questions are those which require the student to make a decision on the basis of the images he perceives.

Tally-type questions, and those that depend on literal interpretation, do not provide the type of discrimination between the creative individual and the intelligent individual that is found in responses to questions which provide for the factors of excitement, the affective nature of images, and point of view.

5. On questions requiring the grasp of sustained symbols, the creative group does at least as well as the intelligent group, although the high creative-high intelligence segment often is somewhat less scattered in response than either of the other two selected groups or than the total population.

CREATIVITY AND IMAGE PERCEPTION:
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TWO TYPES OF QUESTIONS

By

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CHAPTER I

PURPOSE AND ORGANIZATION OF STUDY

Although the identification of intellectual talent has become a fairly sophisticated science since the introduction of the first objective tests to measure intelligence, the related field of the identification of creative talent has until very recent years been largely neglected. The field has been approached, even so, from the standpoint of analysis of the product or of analysis of the creator after his potential has been realized to at least some extent, and the predictive nature of an instrument has been largely unrealized.

It is the purpose of this study to attempt to objectify the analysis of image-conceptualization in the study of literature and to use such analysis as a measure of potential for creativity. The method used is based on the development of open-end questions to identify the individual with potential for creativity on the basis of his methods of conceptualization. The responses to these questions are compared with the results of multiple-choice questions covering the individual's reactions to certain literary stimuli.

The experimental data used are from a two-year total sample (294 students) of eighth-grade language arts classes from the Okemos, Michigan, Public Schools. Selected literary passages, both prose and poetry, were used as the basis for the two sets of questions that were administered to the students in the classes. Procedure employed in the investigation, including selection of samples, criteria for foils, method of presentation, description of population tested, plan of classification of answers by categories, and the statistical treatment of the data, is described in Chapter III.

Recent studies have established that there are certain characteristics common to a great many individuals who are identifiable by their products as highly creative. These investigations serve as the basis of development of the rationale discussed in Chapter II. These studies indicate further that creativity is an identifiable quality, which is present to some extent in every individual and which can be isolated from such other factors as intelligence, reading ability, or language, although, like intelligence, it varies in specialized type as well as in amount from individual to individual.

The subjective reports of a number of creative people have indicated, furthermore, that their thought processes include an imagistic type of conceptualization and that the image perceived varies in type and in intensity from one

person to another. Chapter II also presents evidence regarding this relation of image perception to the creative process.

Many of the factors common to creative people are identifiable, the cited studies reveal, through free-response type questions or through observation by trained workers of the ways in which individuals operate. This study is based on the assumption that highly creative individuals may be identified by the presence of characteristics common to creative people in their answers to questions which permit them to express their reactions in the form of free responses. The association of these responses and the answers to forced-choice questions is shown statistically in detail in Chapter IV.

The understanding of a literary selection is directly related to the ability to understand words, sentences, and ideas expressed in language. Since these factors are also closely related to intelligence factors, a goal of this investigation has been to establish that the questions measure factors other than language ability and mental age. Associations between the answers to the questions and quartile designations of the scores of the subjects on standardized language achievement and intelligence batteries are analyzed in Chapter IV.

The variables of mental maturity and language achievement were employed to establish association of the

individual answers on each question and the subject's language-related achievement and general intelligence. A theoretical framework for the study posits that certain questions--those asking for literal meaning, connotative meaning, and word meaning--which are used as a frame for the study and for observations of types of thinking, would be expected to show significant association with one or more of the achievement and intelligence factors. Other questions--principally those with a major emphasis on image perception--should, according to the theoretical basis, be less closely associated with achievement and intelligence scores.

The theory further proposes that there should be associations between open-end, essay-type questions and multiple-choice forms of the equivalent material. Comparisons of the two forms of the same question are also discussed in Chapter IV. Because some of the questions are not equivalent in form, however, it is not possible to pair the two forms for every question.

The third facet of the theoretical frame is based on the theory that those students shown by the free-response form of the test to be highly creative, but who are not of the highest intelligence, should react differently on the short form to those students whose intelligence scores rate them as highly intelligent but not highly creative.

Answers are studied by literary analysis and chi-square methods to ascertain the significance of these associations; these analyses are reported in Chapter IV.

Studies of creativity have varied greatly in definition of the term, and measurement of "creativity" has ranged from problem-solving to artistic appreciation as indicated by preference for one form over another. All the studies, however, seem to be based on the assumption that creativity can be fostered, and that "it is tremendously important to society that creative talent be identified, developed, and used, that the future of our civilization depends upon the quality of the creative thinking of the next generation."¹

Related Studies

Probably the most actively investigated field in recent years in the area of psychological studies applied to education and social problems is that of creative thought and the identification of the creative individual. In their manner of attacking the problem of identification of original thinking, many of the recent researchers in the field have been creative in the best sense of the term. In the fact that many of the investigators have been able to replicate, or

¹E. Paul Torrance, Role of Evaluation in Creative Thinking (Minneapolis: Bureau of Educational Research, University of Minnesota, 1964), pp. 1-10.

partially replicate, the work of their fellows, they have been true to the nature of scientific inquiry. Most of these researches have not developed instruments of predictive value, however.

The studies by Getzels and Jackson,² published in 1962, have been basic to a number of subsequent investigations. Some of these, such as several by Torrance,³ have been partial replications of the Getzels and Jackson work; others have accepted as basic hypotheses the findings relating to differences between high intelligence and high creativity. Characteristics of creative people devised by Getzels and Jackson are used in the present study, along with statements from several other sources, as bases for determining creative levels in the protocols. This investigator is also indebted to the earlier study for the suggestion of separating the high creative from the high intelligence segment.

E. Paul Torrance and his associates at the University of Minnesota have published numerous research reports based principally on a series of tasks having to do with product improvement, ask-and-guess tests, and a circles test, all

²Jacob W. Getzels and Philip W. Jackson, Creativity and Intelligence (New York: John Wiley and Sons, 1962).

³Op. cit. Although Torrance's own investigations go back before the publication of Creativity and Intelligence, he acknowledges this work in the cited volume and mentions his "partial replication" here. This volume also has a thorough history of the development of tests of creativity.

of which have been scored by a very complex system which Torrance and his staff are constantly revising and re-studying. Recently, these investigators have published a report on a number of follow-up studies that have grown out of their original work and have pointed to other possible outcomes of a massive undertaking of this nature. The part of Torrance's work which is most nearly related to this study has to do with the presentation of a tape recording of unknown sounds and the response of the subjects in telling what "images" the sounds elicit in the imagination.⁴ Otherwise, the approach through largely visual media is quite different from this investigation which is based on a definition of creativity somewhat the same in its emphasis on a broader aspect than the problem-solving approach of some other investigations.

The original basis of much of Torrance's work was J. P. Guilford's elaborate battery designed to study adults in professional activities and to assess such factors as sensitivity to problems, flexibility, fluency, originality, elaboration, and redefinition.⁵ Guilford and his associates have used the framework for the original "Structure of

⁴E. P. Torrance and B. F. Cunnington, Sounds and Images (Minneapolis: Bureau of Educational Research, University of Minnesota, 1962. Mimeographed).

⁵J. P. Guilford, R. C. Wilson, P. R. Christensen, and D. J. Lewis, A Factor-Analytic Study of Creative Thinking. I. Hypotheses and Descriptions of Tests (Los Angeles: University of Southern California, 1951).

Intellect Model" for a study of creativity at the junior high school level.⁶ Chief relevance of Guilford's work for the present study seems to lie in his description of the creative individual.

Relation of Present Study to Others Surveyed

Although most of the studies in the field seem to accept a working hypothesis that creativity potential varies in kind as well as in degree, most of the scholars further indicate a position that a test that detects problem-solving ability, for example, would detect any kind of creative ability. "Fluency" is the label used by some researchers to measure the number of non-verbal responses to a circles test. Although the term is not misused in this connection, it suggests a linguistic type of response; since no test of linguistic fluency in response to a literary model is available, there is no evidence to refute the researchers' apparent belief that this type of approach to fluency is universally applicable.

A survey by Kent and Gretchen Kreuter notes "that the meaning of creativity had broadened" by the beginning of this decade to include scientific thought. Then, they suggest, it narrowed to an orientation "toward the recognition and development of scientific ability" almost to the

⁶J. P. Guilford, P. R. Merrifield, and Anna B. Cox, Creative Thinking at the Junior High School Level (Los Angeles: University of Southern California, 1961).

exclusion of artistic and literary creativity. The tests and their indications for educational innovation may be ignoring "those forms of creativity that do not conform to their own [the testers'] predispositions about the kinds of creative activity that are 'worthwhile' in American society."⁷ The wisdom of such emphasis is questioned by the Kreuters.

The present study is based on the assumption that the types of tests devised in innumerable studies, many of which are based on problem-solving or applications techniques, do not produce the kind of predictive information about potential for literary, and perhaps language, creativity that would assist the language arts teacher in the junior high school. These questions are planned, therefore, to elicit responses to the type of stimulus that the student encounters in the classroom. The more open type of question attempts to produce an open response, differing perhaps from the usual open type of classroom question chiefly in the presentation--in written form rather than in discussion form. In this way, the test parallels the work of a classroom and contributes to the aims of instruction rather than serving merely as fun-type puzzles or extraneous material. If implications for classroom behavior of the teacher also become evident, the applications are not coincidental.

⁷"The Useful Genius," Saturday Review, XLVII (October 17, 1964), p. 66.

This investigation differs from others surveyed, then, chiefly in its attempt to isolate a particular type of literary potential which seems to have been ignored either through identification with a general "creativity factor" or through limitation to scientific creative thought.

There are ample indications in the results as well as the hypotheses from other studies to indicate that creativity is definable and measurable and that at least certain types of creative ability can be identified by existing tests. Some of these instruments, however, are so ponderous that they are usually cut in administration, while others require specially trained administrators and scorers. No tests discovered by this investigator could be fitted directly into the program of the junior high school language or literature class, either in content or in predictive nature.

This exploration is based, further, on the contention that at present much creative literary ability is unidentifiable and hence largely undeveloped. Many teachers are skilled in the identification of talent through intuitive means; however, it is likely that much creative talent remains dormant through lack of identification. Development of instruments which could be used by teachers as additional bases for identification of the creative student may still be several steps away, but the development of questions which could determine objectively some of the same characteristics

heretofore identifiable only through the creative product or through careful analysis of original thought and writing is one step toward the development of such instruments.

Definition of Terms

Creativity--For purposes of this study, the term is used to indicate potential for original thought--thought that connects and synthesizes areas of experience that were separate, with a type of connectedness that may be in itself an art. This type of intuition leaps the boundaries of systematic analysis through "the mediation of symbol and metaphor and image,"⁸ and is therefore related to but separate from cognition that depends on a more literal form of idea development.

Creative individual--Since every individual is endowed with some capacity for original expression, the term "creative individual" is used in this study to denote an individual of high capacity or potential for originality.

Image--The use of image in this study refers to conveyance of meaning through sensory channels; "mental reproductions, representations or imitations of sense perceptions."⁹

⁸Jerome S. Bruner, On Knowing: Essays for the Left Hand (Cambridge: Belknap Press of Harvard University Press, 1962), p. 19.

⁹Fred B. Millett, Reading Poetry (New York: Macmillan, 1950), p. 50.

Protocols--The word protocol is used to refer to the original written responses of eighth grade subjects to the open-end questions.

Long-form and short-form questions--The open-end, essay-type questions are also referred to as "the long-form version." The multiple-choice questions are also called the "short-form questions." Abbreviations L and S used before the question numbers in the discussion and in the appendices refer to these forms.

Limitations

Sample size--The population tested in this investigation consists of 294 eighth-grade subjects in a suburban junior high school in Michigan. The segments of the group separated as high creative subjects, high intelligence subjects, and high creative-high intelligence subjects total 53 students. Generalizations may be drawn only in the light of these limitations.

Assignment to categories--Standards applied to interpretation of the written responses are based upon characteristics common to creative individuals, as these factors are delineated in cited research findings. Papers were coded to preserve anonymity. As a further check on subjectivity, sample papers which had been experimentally rated were mixed with other responses and reread after a lapse of one year, so that rating consistency could be noted.

To the extent that they are found to exist, any statistically **significant** associations between categories assigned essay **responses** and the choices of answers on the equivalent **multiple-choice** questions serve as a further evaluation of **the** consistency of application of the standards.

CHAPTER II

BACKGROUND -- CREATIVITY AND IMAGERY

Creativity as a Facet of Giftedness

Although for some decades the term "gifted" as applied to ability has been a term synonymous with "high I. Q.," there has at the same time been an undercurrent of recognition by those most closely involved in testing that there are abilities, such as originality, not covered by the intelligence tests, and that the tests themselves have not been altered in concept or content to reflect new theories of cognition, learning, and problem solving. While recognizing the intelligence test as probably the best single source of predictive information about school success, Leta S. Hollingworth as far back as 1931 was urging,

It is the business of educators to consider all forms of giftedness in pupils in reference to how unusual individuals may be trained for their own welfare and that of society at large.¹

According to Pritchard, Hollingworth realized that the "definition of the gifted must be enlarged to include a

¹"How Should Gifted Children Be Educated?" Children Above 180 I.Q. (Yonkers-on-Hudson, N.Y.: World Book Company, 1942), p. 195, cited by Miriam C. Pritchard, "The Contributions of Leta S. Hollingworth to the Study of Gifted Children," The Gifted Child, ed. Paul Witty, American Association for Gifted Children (Boston: D. C. Heath, 1951), p. 81.

much broader group than merely those who test at the top of our present mental scales."²

The shortcomings of the metric of intelligence were identified with a lack of recognition of the subject's originality or creative ability, and the subsequent failure of the tests to identify promise of children gifted in this dimension was set forth nearly a quarter century ago by Paul A. Witty:

If by gifted children we mean those youngsters who give promise of creativity of a high order, it is doubtful if the typical intelligence test is suitable for use in identifying them. For creativity posits originality, and originality implies successful management, control, and organization of new materials or experiences. Intelligence tests contain overlearned materials. . . . The content of the intelligence [test] is patently lacking in situations which disclose originality or creativity.³

What may have been chiefly of academic interest to early analysts of the limitations of the mental scales has now become urgent with the increased use of measures of various types to determine who will be admitted to certain types of educational programs and often, through the use to determine college entrance, which students will receive a college education. If current measures are eliminating from possible development a percentage of able youth, additional predictive measures become of more than casual import.

²Loc. cit.

³"Contributions to the I. Q. Controversy from the Study of Superior Deviates," School and Society, Vol. LI (April 20, 1940), p. 504. Cited by Pritchard, loc. cit.

The challenge to educators, then, particularly in areas of the arts, is to develop instruments that will measure and identify these overlooked creative abilities. Yet scholars in these areas had not, and have not to this later date, found ways of overcoming the limitations of subjective methods of study. The American Association for Gifted Children recognizes, in its publication The Gifted Child, that until such instruments are developed, one facet of the understanding of giftedness is undeveloped. Therefore, Pritchard urges a change in the approach to the Problem:

It has long been the habit in aesthetics and other creative areas to dismiss the possibility of developing objective instruments of measurement with the statement that creative ability is both too complex and too subjective to permit the successful development of objective instruments of prediction. Now that the need to identify and educate potential creative leaders toward their greatest social usefulness has become more crucial than ever before, this laissez-faire attitude cannot be tolerated any longer. Those who have potentialities for originality and "the ability to manage, control, and organize new materials and experiences" must be given the opportunity to develop their powers. . . . It is the urgent duty of educators and psychologists to redouble their efforts toward developing new and better instruments for measuring creative aptitudes.⁴

Definition of Creativity

An operational definition of creativity of this type is set forth by Bruner, who, in his 1962 volume of essays, On Knowing, writes of creativity as "effective surprise,"

⁴Pritchard, op. cit.

and then identifies "three kinds of effectiveness, three forms of self-evidence implicit in surprise of the kind we have been considering."⁵ These three kinds of effectiveness he categorizes as predictive effectiveness, formal effectiveness, consisting of an ordering of elements in such a way that one sees relationships that were not evident before, and finally, what he labels as "metaphoric effectiveness":

It, too, is effective by connecting domains of experience that were before apart, but with the form of connectedness that has the discipline of art.

. . . What we are observing is the connecting of diverse experiences by the mediation of symbol and metaphor and image. Experience in literal terms is a categorizing, a placing in a syntax of concepts. Metaphoric combination leaps beyond systematic placement, explores connections that before were unsuspected.

. . . For the while, at least, we can do worse than to live with a metaphoric understanding of creativity.⁶

Image Perception as an Aspect of Creative Thought

Bruner is apparently writing here of the type of creative thought that some readers have believed that Einstein was referring to when he spoke of his thought as images or that Max Eastman is explaining when he writes of the poet's use of symbol or image:

A poet dwells upon a symbolic image, not merely because it is warmer than the idea, but also because it is the essence of the idea. . .

Poetry but dwells upon and perfects that significant imagery which is the natural instrument of all thinking. . . . [The] idea so perfected is usually

⁵Jerome S. Bruner, op. cit., p. 19.

⁶Ibid., pp. 19, 20, 30.

greatest when the image stands alone, when the meaning in its more abstract form is not expressed.⁷

Amy Lowell is speaking particularly of auditory imagery in the essay "The Process of Making Poetry" in which she says that some poets speak of hearing a voice, so that they write almost to dictation.

I do not hear a voice, but I do hear words pronounced, only the pronouncing is toneless. The words seem to be produced in my ear, but with nobody speaking them. This is an effect with which I am familiar, for I always hear words even when I am reading to myself, and still more when I am writing. In writing, I frequently stop to read aloud what I have written, although this is really hardly necessary, so clearly do the words sound in my head.⁸

Not only is the image the essence of the idea, however; to some it is the essence of feeling also. Fairchild, in The Making of Poetry, writes of this facet:

For everything I come to know through my senses, for everything in connection with what I do or feel I can call up some kind of mental image; . . . The only effective way of arousing any particular feeling that is more than mere bodily feeling is to call up the images that are naturally connected with that feeling.⁹

⁷ Max Eastman, Enjoyment of Poetry, pp. 148 and 151, cited by Helen Hartley in Tests of Interpretative Reading of Poetry, (Teachers College, Columbia University, Contributions to Education, 1930), p. 8.

⁸ Reprinted in Brewster Ghiselin (ed.), The Creative Process (New York: New American Library, 1952), p. 110.

⁹ Arthur H. R. Fairchild, The Making of Poetry (New York: G. P. Putnams, 1912), p. 24.

Imagistic Studies in Psychology

From 1880, when Francis Galton investigated the ways **in** which different individuals could visually reproduce the **past** and found that there is great difference in the degree **of** visualization, until the second quarter of this century, **when** new scientific approaches to research discredited the **investigative** methods in use to study the phenomena of **per-**
ception, research in the field of image perception consisted **chiefly** of subjective analysis of trained subjects who **described** how they perceived various images.

Titchener, for example, described brightly colored, **often** audible, and sometimes scented images, and through **associational** imagery he could supply images for even the **most** abstract words. He describes his image of meaning **as :**

. . . I have been ideating meanings all my life. And not only meanings, but meaning also. Meaning in general is represented in my consciousness by another of these impressionist pictures. I see meaning as the blue-grey tip of a kind of scoop, which has a bit of yellow above it (probably a part of the handle), and which is just digging into a dark mass of what appears to be plastic material. I was educated on classical lines; and it is conceivable that this picture is an echo of the oft-repeated admonition to "dig out the meaning" of some passage of Greek or Latin. I do not know, but I am sure of the image. And I am sure that others have similar images.¹⁰

¹⁰ E. B. Titchener, Lectures on the Experimental Psychology of the Thought Processes (New York: Macmillan, 1909), pp. 18-19.

Imagistic Studies in Literature

I. A. Richards was speaking of some of this psychological research when, in 1925, he wrote in a footnote to Principles of Literary Criticism,

The description of images belongs to the first steps in psychology, and it is often possible to judge the rank and standing of a psychologist by the degree of importance which he attaches to their peculiarities.¹¹

Generalizing about the research then known in the field of perception, Richards could say,

It cannot be too clearly recognised [sic] that individuals differ not only in the type of imagery which they employ, but still more in the particular images which they produce. In their whole reactions to a poem, or to a single line of it, their free images are the point at which two readings are most likely to differ, and the fact that they differ may very well be quite immaterial. Fifty different readers will experience not one common picture but fifty different pictures.¹²

Most of the later writers who have quoted Richards on the subject have singled out the statement: "Too much importance has always been attached to the sensory qualities of images."¹³ Both Richards's definition of image and the relative importance he places on sensation are in the explanation which follows: "What gives an image efficacy is less its vividness as an image than its character as a mental

¹¹(New York: Harcourt, Brace, and World, 1925. Reprint, undated, ca. 1962), p. 117.

¹²Ibid., p. 122.

¹³Ibid., p. 119.

event peculiarly connected with sensation."¹⁴ Citing the research showing the widely differing perceptions of images, Richards hypothesizes that something "takes the place of vivid images in those people with low image perception," and that, "provided the image-substitute is efficacious, their lack of mimetic imagery is of no consequence."¹⁵ In another connection, Richards says, in his later study,

Practical Criticism:

With some readers imagery of all kinds rightly plays an immensely important part in their reading. But they should not be surprised that for equally good readers--not of the visualizing or image-producing type--images hardly appear, and if they appear have no special significance. It may seem to the visualizers that the poet works through imagery, but this impression is an accident of their mental constitution, and the people of a different constitution have other ways of reaching the same results. . . . I would not deny that many readers may find their imagery a most sensitive and useful index to the meaning. But the merit of the poem is not in the imagery. To put the error in its crudest form: a poem which calls up a "beautiful picture" is not thereby proved to be a good poem.¹⁶

T. E. Hulme does not distinguish between image and metaphor, but his statement nevertheless seems to refer to images of the type defined by Richards. Nevertheless, Hulme cites the importance of the image as central to an understanding of intuition, and hence of certain kinds of thought processes, saying:

¹⁴Ibid.

¹⁵Ibid., p. 120.

¹⁶I. A. Richards, Practical Criticism (New York: Harcourt, Brace, 1929), pp. 223-224.

Visual meanings can only be transferred by the new bowl of metaphor; prose is an old pot that lets them leak out. Images in verse are not mere decoration, but the very essence of intuitive language.¹⁷

Coming as he did at the end of a very active period of investigation into the matter, Richards was able to generalize the findings without pointing to the weakness of the subjective methods which were already beginning to be questioned, as they would eventually be replaced, by the more scientific objective studies. The immediate result of the questioning attitude, however, was the virtual abandonment of any type of investigation into the processes of thought, since the methods used depended heavily upon the very introspection that was falling into disrepute. Consequently, basic research into image conceptualization evidently was quiescent if not dead in the second quarter of the present century.

Although the psychologists were abandoning the study of imagery along with their study of perception, literary scholars continued to work in the field. One of those to make a literary study of the image during this period was Caroline Spurgeon, whose volume published in 1935¹⁸ set some basic patterns and demonstrated the possibility of the scientific approach to certain phases of poetic analysis,

¹⁷T. E. Hulme, Speculations (New York: Harcourt, Brace, 1924), p. 135. Cited in William K. Wimsatt and Cleanth Brooks, Literary Criticism (New York: Alfred A. Knopf, 1962), p. 661.

¹⁸Shakespeare's Imagery (New York: Macmillan).

although she actually limits much of the analysis to simile and metaphor.

An Experimental Approach to Imagistic Study

A system of analysis in which the basic image-making words are assigned to categories has been developed by Fred B. Millett, who conceives of imagery as the "evocation . . . of mental reproductions, representations, or imitations of sense perceptions."¹⁹ Millett's system is the first step in a progression which could approach the study of image perception and the relationship of the evocation of images to the individual's creativity potential by objective measures.

The nature of imagery and its dual focus in psychology and literature is explored by Wellek and Warren in their 1956 publication, Theory of Literature in which the meaning of image is clarified as separate from metaphor and symbol.

Imagery is a topic which belongs both to psychology and to literary study. In psychology, the word "image" means a mental reproduction, a memory, of a past sensational or perceptual experience, not necessarily visual.²⁰

Treating imagery as part of a progression of image, metaphor, symbol, and myth, these scholars stress the historical emphasis on the ornamental aspect of the figure:

¹⁹Op. cit., p. 50.

²⁰Rene Wellek and Austin Warren, Theory of Literature (New York: Harcourt, Brace, 1956), p. 182.

The whole series (image metaphor, symbol, myth) we may charge older literary study with treating externally and superficially. Viewed for the most part as decorations, rhetorical ornaments, they were therefore studied as detachable parts of the works in which they appear.²¹

To Wellek and Warren, as to Fairchild, the image is not mere decoration but is an essential part of the creative act both in conception and in perception.

If, as these studies of imagery and the subjective accounts of many creative people indicate, image perception is an integral part of the process of perception as well as of creation, and if there appears to be a wide variation in image perception from one individual to another, then one predictive measure of creative thought might be found in the ways in which images are perceived by different individuals. To test this hypothesis is one of the purposes of this study.

Characteristics of Creative Individuals

In this connection, it is helpful to consider the rôle of image conceptualization in relation to other characteristics of creative individuals. As would be expected, some of these facets are much more closely connected to image perception than others. Studies of creative individuals have pointed to several characteristics common

²¹Ibid.

to creative people, including these listed by Getzels and Jackson and presented here in condensed form:

(a) High creatives tend to free themselves from the stimulus, using it largely as a point of departure for self expression; (b) High creatives express more wit and more violence than the high I. Q.-low creatives; (c) The high creatives diverge from stereotyped meanings; and (d) The high creatives are more willing to "toy with elements and concepts" than are the high I. Q.-low creatives.²²

These same characteristics are noted by others; Guilford's "divergent thinking" would be another name for the first of the above points. Barron finds in highly creative artists a response to apparent disorder and a need to find a subtle ordering principle²³ and McKinnon speaks of highly creative architects' "liking of the rich, complex, and asymmetrical."²⁴ Both of these studies lead Berelson and Steiner to hypothesize:

Highly creative people show a preference for, and interest in, complexity and novelty; they have intrinsic interest in situations that require some resolution, rather than those that are cut-and-dried.

Highly creative people are more likely than others to view authority as conventional rather than absolute; to make fewer black-and-white distinctions; to have a less dogmatic and more relativistic view of life; to show more independence of judgment and less conventionality and conformity, both intellectual and social; to be more willing to entertain, and sometimes express,

²²Op. cit., pp. 51 ff.

²³Bernard Berelson and Gary A. Steiner, Human Behavior (New York: Harcourt, Brace, and World, 1964), p. 299. Richards, who speaks of a poem as an ordering principle by means of which the poet resolves the tensions existing between disparate factors, seems to be approaching the same factor from another direction.

²⁴Ibid.

their own "irrational" impulses; to place a greater value on humor and in fact to have a better sense of humor; in short, to be somewhat freer and less rigidly controlled.²⁵

Many of the studies cited have dealt with mature artists recognized by their fellows as highly creative. It is reasonable to assume that these same characteristics would be found, to at least some extent, in the complex of attitudes and actions of younger, potentially creative people. Additionally, these characteristics are observable in each individual's reaction to literature he reads and art forms he appreciates as well as in the product of his own effort and should, therefore, indicate some ways in which the student with potential for originality can be recognized and encouraged in the development of his capacity for productive work of a type that might otherwise be left to chance identification and development.

A study of these processes of conceptualization includes other thought processes which are often considered to be related to reading, perhaps because most ideas seem to come from reading. These processes, which are also explored in an attempt to understand the ways in which creative individuals differ from the less creative, include getting inferential meanings, identification of higher level meanings, and the power to differentiate, as exemplified in character analysis, humor, and point of view. At the same time, it is

²⁵Ibid., pp. 229, 230.

possible to observe certain other characteristics found in the quoted recent studies to be typical of highly original subjects, including such things as humor, freedom from stereotypes, divergent thinking, tendency to use the stimulus as a point of departure, interest in complexity, independence of judgment and expression of "irrational" impulses.

The development of questions to measure these qualities presents the problems common to development of any test instrument, such as how to determine whether the thing the question purports to measure is indeed the thing measured; additionally, it presents certain problems unique to the nature of the creative process: how, for example, the evaluation can differentiate between the individual who employs the stimulus as a point for departure from which he launches his own imaginative sequel and the individual who simply misinterprets the matter of the selection. Such problems would be present to some extent in any form of answer, free-response or forced-choice, but they are much more puzzling in the short-answer form in which there is no explanation as to why the subject has chosen one answer rather than another.

One way to meet this problem is to ask why one answer was selected rather than another, but such subjective methods have been found to have low validity. Chosen instead for this study is the method of having the subject state first in essay form his own reaction to a given

selection and then comparing his responses on a forced-choice instrument with the statements. In this way the longer, free-response answers could be evaluated first and the answers on the short-answer forced-choice test could then be compared both individually and statistically.

Since the questions were to be given to students at the eighth grade level, most of the students were assumed to be able to express themselves sufficiently well to be able to state their reactions. The wide variation in writing ability was somewhat equalized by disregarding quality and quantity of expression and looking for originality of ideas and expression. Evaluation procedure was planned to account for this variation.

Observation of the eighth grader as critic suggests several advantages in selecting the student at this level for the study of creative processes. The student at this level has had frequent pleasant exposure to poetry and usually to other forms of literature without having spent the hours of stultifying analysis which has often served to dull the outlook and pleasure derivable from literature by the more advanced student. The fact that he does not have a patent term for many of the things that he observes may cause him to search about for a way of phrasing his observations which will bring a fresh and original outlook into his writing. Finally, he has not acquired all of the inhibitions to thought and self-expression which would make the

uncovering of his creative potential useless. Because there is still a certain malleability in his development, the very factor of making him aware of his creative ability may in itself contribute to increasing his creative output or even, as some writers suggest, the potential for greater creative power.

It is, therefore, the purpose of this study to compare the answers given on free-response questions to answers by the same students to objective questions covering the same concepts and selections, in order to determine if it is possible to use such an objective measure to identify certain creative elements apparent in the student's essay-type answers.

Analysis of the two types of questions is made by dividing the study into two parts: (1) Answers to the free-response questions are analyzed to find evidences of the kinds of thinking shown by recent scholarship to be typical of the highly creative individual. (2) These answers are compared with the forced-choice answers in an effort to ascertain if it is possible to use the short-answer form of the question to measure the creativity potential of the student. These two parts of the study are discussed in detail in Chapter IV, in which student protocols are analyzed and comparison of individual and group responses is made for both forms of the questions.

CHAPTER III

PROCEDURE

Selection of Literary Samples

Ten literary selections were chosen as the bases for the questions. These selections filled the following requirements set up for the selections; each selection must:

1. Be short enough in length to be quoted in entirety, or be a segment presenting complete meaning not dependent on context.
2. Present one dominant image or image type, or present several clearly distinct images.
3. Convey meaning by at least one of the imagistic types analyzed by Millett.
4. Be outside the range of poetry or other material usually covered by the students of the grade or previous grades.
5. Be typical of a type of literature, not a mere puzzle.
6. Be as free as possible of inversions or other peculiarities of expression which might inhibit understanding.

7. Be a standard work, or a work by a standard writer, or be an artistically sound example of poetry or prose. (In one instance, this requirement was relaxed in order to include a complete segment of a story.)

Additionally, works were arranged so that those with more direct meaning generally were presented early, with progression to the more abstract and involved selections. The rule about difficulty, however, was relaxed to permit variety in the students' lessons and to allow development of concepts through parts of the questions themselves. The list of works is included as Appendix A.

These selections were chosen as the bases of two forms of questions. The first questions called for essay, free-response type answers; the second form of the questions called for multiple-choice answers. The selections and the two forms of the questions are attached as Appendix B.

In addition to the presence in each selection of strong sensory images, the literary selections were individually chosen to contribute to the over-all picture of image perception or interpretation. Thus, selections were made of a variety of poems which present images of varied types to the reader. These images range from the simple and direct visual image to the rather abstract and negatively perceived images of silence and darkness. Three of the poems contain sustained images or symbols; one of the prose selections was included principally to study the students'

feeling for mood, and one was included chiefly to learn the reactions to poetic diction when the poet employs an expression that they had been taught was "incorrect." Several questions about the poet's purpose or the meaning of the poem were included, because, as Richards points out, "The original difficulty of all reading, the problem of making out the meaning, is our obvious starting point."¹

Although the two forms of the questions were planned to be complementary, the very nature of the two approaches made it impossible to phrase the questions in such a way that the two forms were parallel or that the free-response form would always produce an answer comparable to the matter covered in the items of the multiple-choice form. Some questions, therefore, are not directly comparable.

Criteria for Response Items

The teaching as well as the evaluative and predictive worth of the instrument is a factor in phrasing each question, but the teaching has to be done in such a way that the direction of the answer is not given, particularly in the multiple-choice form. In some cases, for example, it is necessary and possible to use items that will discriminate understanding without giving a misleading cue which might leave a lasting mistaken impression. Such a case is found in the definition questions, where multiple dictionary

¹Practical Criticism, p. 174.

meanings, all correct, give the student a chance to make fine discriminations in meaning and may also increase the understanding of the poem. The first question about selection VI, "Anticipations," is such an example. Three actual definitions are employed; the fourth adds a phrase, "in importance," to change the meaning from the actual definition. The question used is,

1. In order to understand the poem, the reader would need to know the meaning of preliminary. Which of these meanings would fit best?
 - a. A contest designed to eliminate the less qualified competitors (as in a sport).
 - b. A minor match or contest that precedes the main event.
 - c. Something introductory or preparatory.
 - d. Something that comes first in importance.²

One definition question was included to direct the students away from a misreading of the setting of the poem "Rhodora," since the usual eighth grade reader often fails to realize that words such as desert may have other meanings than the ones commonly encountered and which would interfere with the tactile images the poet placed in the poem, again the items are dictionary definitions, with some editing. The question reads,

2. Which of the following meanings of desert must you know to make the meaning complete?
 - a. A barren tract incapable of supporting life without an artificial water supply.
 - b. A forbidding prospect (as bleak, unrelieved changelessness).

²Philip Babcock Gove, editor, Webster's Third New International Dictionary (Springfield, Massachusetts: G. and C. Merriam Company, 1961), p. 1789. Items for the two definition questions were edited from the complete entry.

- c. An area of ocean believed to be devoid of marine life.
- d. A desolate unoccupied plain or coast or pathless woodland.³

Most of the questions and the choices are stated positively; only three questions ask what is not done in the selection. In each negative question the negation is underlined for clarity. Items have a number of different forms of negation, including never, no one, eliminate, not, and less, the negative prefixes un- (unrelieved, unoccupied), and in- (incapable, incorrect), and the suffix -less (timeless, changeless).

Questions are worded to avoid forcing a choice that would be based on approval or disapproval of the content or the style of the writing or that would require comparison, which is based on a selective process not wholly appropriate to exploration.

At least one question about each literary selection has a pair of responses that attempt to distinguish between a literal correct answer and another answer which requires perception through imagery.

Requirements of length made more difficult the task of finding prose selections to fill the requirement that the piece be self-explanatory. Although each was taken from the midst of a story, each of the prose excerpts used is a complete incident. The excerpt from "Pigs Is Pigs" was

³Ibid., p. 610.

included chiefly to try to detect the student's feeling for mood and the ability to project a story. The paragraphs from Look Homeward, Angel are closer to the poems used in evocation of imagery, but this selection also gives opportunity for an extension of imaginative abilities.

Method of Presentation

In order to remove the factor of reading ability as much as possible from the presentation of the selection, each piece was prepared for simultaneous presentation on duplicated sheet and on a tape recorder. No titles or authors were given. To each group a brief explanation was made of the nature of the assignment, and it was clearly stated that although grades would be given on the material, the grades would be on the ideas and their presentation and that there were no clearly "right" and "wrong" answers. Length would be a consideration only as it might affect the completeness of the answer. It was felt that the threat of grades was thus minimized, although the grade factor cannot ever be completely discounted in a school situation.

The first selection was presented by playing the tape over the speaker of the tape recorder to the whole class. Each student was then allowed, after he finished his answer to each question, to go to the tape recorder to listen over earphones to each subsequent selection, picking up the accompanying copy of the material and the questions

on the way. Just as there was no limit to the length of the answers, each student was allowed to listen repeatedly to the recordings. All work was done within the period of the class time, but no limit was placed on the number of class periods that might be used. Dictionaries were available in each student desk and could be used at any time. Student responses to this form of the question are discussed in Chapter IV.

The objective form was given after all students had completed the essay-answer form. The recordings for the objective test were played over speakers, with time being allowed between the selections for answering the questions. In response to a request from any member of the class, any selection was replayed.

The original plan called for revision of the instrument after the first administration in order to clarify or reword, with the possibility of using the students' responses in new response items. It was decided, however, that the original administration could best be used as a control to attempt to determine the effect taking the essay form of the questions has on the answers given to the multiple-choice form. The second administration, therefore, consisted of giving only the odd-numbered questions of the essay test plus the complete multiple-choice instrument. The second group did not have any encounter with the other half of the selections until the objective form was given. Plate I shows in chart form the size of each test group and the questions the group received.

Plate I

Class Year	Number of Classes	Number of Students	Open-end Questions	Forced-choice Questions
1962-63	5	133	all (I-X)	all (I-X)
1963-64	6	161	I, III, V, VII, IX	all

Description of Population Tested

The first group, numbering 133, consisted of five classes, all taught by the writer; the second group, which numbered 161, consisted of six classes, five of which were taught by the writer. In the sixth class the test was administered by the writer. The two groups were not statistically different at the .05 level in sex or on the basis of scores on the paragraph meaning, word meaning, and language sections of the Stanford Achievement Battery or on the scores of the California Test of Mental Maturity, as determined by two-by-two tables of the chi-square test of significance. Each group represented the total population of the eighth grade of the Okemos, Michigan, Junior High School for the year studied, the first group being the 1962-63 class and the second the 1963-64 class. The tests were administered at the same time of the year after exposure to approximately the same course of study. Neither group had been given special preparation in class for the material

covered on the instruments, although each class had read poetry at times during the year. The only change made in presentations to the two groups was in the use with the second group of multiple tape recorders with as many as nine sets of earphones each to replace the one recorder with nine sets of earphones used with the first group.

The method of presenting the material on the tape recorder was planned to be helpful to the student who might read some of the material with difficulty. Actually, some of the most reluctant readers were some of the most avid listeners. Although the students had been using the tape recorder all year to record their own oral class presentations, many of them still found stimulating the novelty of having their lessons presented in this form. Since there were no time limits on the writing, and some of the students had much to say about some of the answers, many of the students in the lowest decile of the classes, who generally had less to say about each selection, finished writing earlier and hence had more time to listen repeatedly to one selection or to go on to the next selection. Some of these students gave their best thought of the year to the writing of the answers and seemed to enjoy being closer to the level of understanding of the rest of the class than they usually found themselves.



The demand on the student of writing of this type is high. Richards⁴ feels that asking university students to react to four poems a week is rather unreasonable. Most of these students completed their work on the ten poems in less than ten forty-five minute periods or on the split-halves version in about five forty-five minute periods. The students who wrote the full test seemed to hold interest to the end as well as those who wrote the half. The pacing, however, was the students' own, although most of the students did not want to take so much longer than others in the class that their slowness became noticeable.

No discussions were held on any of the subjects covered in the poems, and the only interpretation given was to explain the use of "companion" by suggesting that a poem might have been entitled "Winter" and asking what title might be used for a companion poem. Class study of figures of speech had been limited during the year to alliteration and simile, and the subject matter of imagery had been deliberately avoided in earlier study. It was felt that the approach to this facet of poetry on the test would be adequate for the year and it was felt desirable to keep the subject fresh so that the viewpoints would be the students' own.

Student reactions were quite interesting to watch.

A number of students recognized on the short-answer questions

⁴Practical Criticism, p. 298.

points similar to ones they had made on the essay form, and several asked if the test had been made up from their answers. One item which caused much quiet amusement as different students appreciated the joke was the one which said Eugene's imagination was running out of adjectives. It seemed from watching the reactions of the students as they listened to the selections that there might be some way of judging the creativeness of the response by the amusement the selection caused. One student who was particularly enjoying the plight of Mr. Morehouse in the last selection was asked later about the source of his fun. He shattered all illusions of an original evaluative process when he replied that he thought it was particularly funny because his next-door neighbor was Mr. Morehouse.

Plan for Classification of Answers by Categories

Evaluation of the essay responses was based on a four-point scale. Category I includes those areas judged to be both factually correct and to have elements of creative thought.

Category II includes responses judged to be creative by one or more of the criteria developed above and shown to be characteristic of high creativity. An answer is often assigned to this category because the student transfers what he sees to the way it makes him feel. It may consist of perceiving with one sense impressions that might by others

be perceived, if at all, by a different sense. (In selection **III**, for example, perception of pumpkin as a taste or odor **image** is considered this level while perception as a sight **image** is considered level **III**.) Category **II** responses would depart from those judged "factually correct" by placing more emphasis on the reader's own interpretation or by ignoring at least some of the clues to render a complete interpretation of the original. It is not to be interpreted as in any way inferior to Category **I**; actually many of the "creative" factors point to this level as a highly creative form.

Category **III** answers are factually correct, but the reader adds nothing of his own to the interpretation.

Category **IV** is factually incorrect or departs from the clues given in such a way as to be considered a misinterpretation, or is so shallow in interpretation as to suggest a false conclusion. It is possible that misuse of language in the answer could contribute to such an interpretation. It could also result from hazy interpretation by the student, resulting in a title which is awkward or verbose, or in a rambling answer which dwells chiefly on a minor point. Occasionally it is assigned because the student refuses to grapple with the problem, either saying he does not understand or stating that there is not enough to judge.

To give individual and group anonymity to the reading and categorical arrangement of the answers, each paper

was assigned a number, and names were not used. At the time of reading, the papers from the two year groups were intermingled, and all answers for each question were read and rated at one time. Each reading was started at a different point in the number sequence, and on some questions the reading was reversed so that no paper or group of papers enjoyed, or suffered, the cumulative effect of being early or late in the evaluative process. At the eighth grade level, most students have not developed a "masculine" or "feminine" writing pattern, and the sex of the writer is not usually evident to the evaluator. Even the thought patterns and wording are not necessarily sex-revealing for most of the papers.

Occasionally, the evaluator found an answer so original or well-stated that note was made of the student's number so that the answer could be identified later. Sometimes there was the thrill of discovery--the belief that here a new talent had been uncovered, which somehow had been missed in the year's earlier writing. With very few exceptions, the "new" talent turned out to be a student whose ability had shown up earlier in the year in other writings, particularly in those activities giving room for individual expression.

Statistical Treatment

By the use of electronic data processing methods, answers and categories of each student on the two forms of

the questions were transferred to punched cards, along with the control information including sex, year, and scores on the Paragraph Meaning, Word Meaning, and Language Sections of the Stanford Achievement Test and the total score on the California Test of Mental Maturity.⁵

The three sets of SAT scores and the CTMM scores were then translated into quartile by boys and girls and the quartile number was punched into the data card. These quartiles were in turn used as variables in the following operations.

By use of the program designated as Analysis of Contingency Tables (ACT II) on the Control Data Corporation 3600 computer, the variables were converted into contingency tables and the chi-square of each table was derived. Also shown on each table were individual cell chi-squares and the numbers and percentage totals for each cell and for the columns across and down. Degrees of freedom were used to determine the level of significance of each chi-square value.⁶

⁵These instruments will be referred to in the following discussions as the SAT and the CTMM. The instruments were administered to each class in the fall of the year preceding the administration of the instruments of this study. Since some students enrolled after the tests were given, scores on these instruments were not available for twelve students who completed the remaining parts of the study. Figures therefore show some variation when these variables are used.

⁶Chi-square tables used were drawn from Standard Mathematical Tables, Tenth Edition, edited by Charles D. Hodgman and Samuel M. Selby (Cleveland, Ohio: Chemical Rubber Publishing Company, 1954), p. 245.

The .05 level of significance was set for the region of rejection.

Quartile figures for each of the SAT sections (paragraph meaning, word meaning, and language) and for the CTMM were used as one dimension of the table and each category assigned to an answer on the essay form or each answer number selected by the students on the multiple-choice form of the instrument served as the other dimension for a series of 324 tables. The levels of significance are shown on the summary pages included in the addenda as Table C.1, Appendix C. A significance level of .01 means that in only one case in one hundred would the relation shown on the table be due to chance factors; a significance level of .001 means that in only one case in one thousand would the relation be due to chance. Where no figure is shown in the summary table, the relation is not significant at the .05 level.

The essay-type categories were then used as one dimension and the equivalent short-form answers were paired as the other dimension for the study of the equivalency of the two forms. Table C.2 in Appendix C shows the chi-square analysis of the two forms of the questions.

The factor of sex is shown in Table C.3, Appendix C, in which one dimension consists of sex and the other of each of the long- and short-form answers.

Since the two administrations of the instrument were ^{as} nearly alike as possible except in the use of the split-
^{halves} version as a test of the effect of the long form on the short-form answers, one set of tables has as one dimension the year of administration, and the 63 variables forming the other dimension are those of answers to the two forms of the questions. Showing those associations that are significant statistically, Table C.4 in Appendix C is divided into sections showing the questions on which the second group had the long-form questions and those on which it had only the short form of the selection.

In order to make direct comparisons between those students judged to be most creative and those with high intelligence, a statistical analysis of the first year group was made according to the following plan.⁷

For purposes of this part of the study, the first two categories assigned to answers on the long form of the test were weighted equally, and the quartile of the class with the largest number of answers in these categories was

⁷ Since the second year group responded only to questions about the literary selections with even numbers, it was felt that a more reliable division of the group could be made using only those who had responded to all the selections. It has been noted that earlier study had shown no significant differences between the two groups on the three sections of the SAT, on the CTMM, or on sex, and they were therefore judged not to be significantly different for purposes of this study.

designated as the "high creative" segment.⁸ The highest quartile of boys and the highest quartile of girls on the California Test of Mental Maturity, already identified and the information punched into the data cards, were designated the "high intelligence" segment. There were fourteen students who overlapped; these fell in both the high intelligence and the high creative groups. Data for these students were separated from the other two groups, and they were identified by the label "high creative-high intelligence." There were 53 students in the three groups thus selected: 14 in the high creative-high intelligence segment, 20 in the high creative designation, and 19 in the high intelligence quartile. Short-form answers of these three groups are shown in percentage figures as Table C.5, Appendix C. For comparative purposes, the responses of the remaining 241 students of the total population are shown in percentages in the same table. Because of the small number in the selected groups, chi-square analysis results are not given.

Follow-up

The first year the follow-up was through informal class discussion in which students expressed interest in

⁸ Those in the upper quartile were those who had been assigned to the first or second categories on at least 24 of the 33 long-form answers, and seven had responses in these categories for 30 or more questions, although only two had all responses fall in categories 1 and 2.

learning who the writers were and what the other parts of the quoted stories contained. In these classes the titles and authors were listed for the students and the entire story "Pigs Is Pigs" was read aloud for the classes by some of the better readers in each group. Robert P. Tristram Coffin's prose setting for "The Secret Heart" was also read. Students were asked for their reactions to presentation of literature in this way. Some expressed enthusiasm; almost all expressed approval. Several felt they would have done better on some of the selections if they had been given some information about the work. (A few felt, for example, that "Meeting at Night" had stimulated an interest that was not satisfied by the poem's ending.)

After administration the second year, students were asked to complete an evaluation sheet; this follow-up evaluation form and tallies of information supplied are appended to this paper as Appendix D. Some of the replies on this evaluation are discussed with the reports of the responses to which the evaluations relate.

Detail in the Analysis of Long-form Answers

The centrality of the essay answer to the study is evident in the emphasis placed on analyses of individual protocols in Chapter IV. The statistical treatments comparing the two forms, as well as the studies of the

relationship of the responses and the standardized instruments, are based on the use of the essay answers as evidence of the creative thought of the subjects.

Quotations in Chapter IV were selected to illustrate various approaches to the questions, evidences of creative thought as these factors are identified by scholars, and student reactions.

Responses of any individual are not consistently creative or original. Drews has said in her study of the self-image of adolescents that:

There are many students who waver between the open, seeking approaches and the closed, nonintellectual behaviors. And even the most uncreative occasionally show inclinations toward liking freedom and spontaneity as they describe their ideal selves.⁸

So, in this study, are creative aspects present in the work of most students, although some have only one or two protocols that show evidence of much originality. Others have a majority of answers falling into Categories I and II, although for only two students do all answers receive one of these "creative" ratings. The protocols are quoted, therefore, as individual creative answers, not as the response of a student selected as creative on the totality of his writing. Statistically, however, material is treated both by comparing the answers of students giving a creative

⁸Elizabeth Monroe Drews, "Profile of Creativity," National Education Association Journal, LII (January, 1963), p. 28.

response on the individual questions and by comparing the responses to the short-form answers of those selected on the basis of total number of creative answers in written responses as highly creative.

The differences between answers given by boys and those by girls are also relevant. Richards suggests that part of the observable difference in the writing of university students is due to the wider poetry-reading background of the girls or to the earlier maturing of the young women. This maturity gap is evident in the junior high student to perhaps an even greater extent, manifesting itself in language skills as well as in social and physical maturation. The sex factor is significant in more of the essay responses than in the multiple-choice answers. In the second form it is indicated in a greater scattering of answers, while usually in the long form it is evident in a larger number of boys whose answers are assigned to Category IV.

Because a number of factors are present in the essay answers, and often several types of creative thinking are observable in the answers to one essay question, the discussions in Chapter IV are centered around ideas rather than around the responses to one selection. These discussions begin with ideas about the meaning of the poem, since the meaning is part of the entity that is the total experience of the poem, or as Brooks terms it the "controlled

experience, . . . the unifying principle, . . . the attitude
 or complex of attitudes"⁹ which are the poem. The ideas
Progress, furthermore, to image and symbol, which are also
 the structure of the poem, not "decorations, detachable
 parts of the works."¹⁰ The interrelationship of meaning and
 image and symbol is central to an understanding that the
 ideas of the poem cannot be expressed completely in para-
 phrases. In order, therefore, to measure the student's
 grasp of the image, it is necessary to understand his
 conception of the poem as an entity. At the same time that
 such observations are made, it is possible to measure
 creative aspects of the approach of the reader to the
 selection. Thus, some of the discussions of one set of
 responses move from a rather direct statement about the
 theme to a highly symbolic interpretation. These approaches
 are in themselves evidences of the complexity with which the
 subject deals and are therefore measures of levels of
 creative responses.

It is suggested that before proceeding to Chapter IV
 the reader turn to the literary selections and the questions
 about them which are contained in Appendix II. Reference
 to these selections and to the questions about them will

⁹Cleanth Brooks, The Well Wrought Urn (New York:
 Harcourt, Brace, and World, 1947), p. 191.

¹⁰Wellek and Warren, loc. cit.

make clearer the discussions and the quoted material contained in the various sections of the next chapter.

CHAPTER IV

EVALUATION OF QUESTIONS

Evaluation of the two types of questions was divided into two main steps: study and categorization of the essay answers according to the aspects covering comprehension and creativity, and comparison of these answers with the responses to the multiple-choice forms of the questions. One phase of placing the responses in categories I to IV centered around searching for the elements of originality present in each protocol as these elements are presented in the characteristics of creative people.¹ In this evaluation, detailed study of the protocols revealed presence of these creative characteristics in many responses, some of which are quoted here as the basis for certain statements about the responses and as indication that these elements are indeed evident in the free responses of students, as the rationale upon which this study is based contends.² Although assignment to Category IV is relatively infrequent, some protocols placed in this category are quoted as examples of differences between using the stimulus as a point of departure and "missing the point" through misinterpretation.

¹Pp. 23-25, supra.

²P. 25, supra.

Part 1

Understanding of Literal Meaning

Since the understanding of the literal meaning of the selection is basic to any subsequent ideas about it, first to be considered here are four elements of meaning: overall understanding, word meaning, narrative, and character. Although these elements are related to certain of the factors in abilities in reading, word meaning, and intelligence, they have, additionally, a relationship to the elements identified as common to creative individuals. In trying to discover the perceptual aspects of creativity, emphasis is also placed on imagery, symbolism and figurative meaning, humor, freedom from stereotype and convention, poetic diction and the treatment of literary convention. As each of these indications of understanding and original response is discussed, the equivalent forced-choice response is considered, as are the statistical associations of the question and the control factors.

Overall Understanding

Several questions were included in the study simply to try to establish whether the student understood the literal meaning of the poem. Although the student will, of course, bring some interpretation of his own to the

selection, he must have some basic understandings on which to build; these questions were designed to measure that basis of understanding. One of these questions' (VIII, 1) asks, "What is it that the poet fears?" Another (II, 3) asks, "What do you think the poem is about?" The third (V, 2) is, "What questions do you think the poet seems to be trying to answer in this poem?"

Meaning: The Theme of Fear

In answer to the first question above, one student typical of a number in Category I writes that he fears " . . . death before he has had a chance to fulfill his talent and power to love."³ Or, another says, " . . . death may claim him before he has done everything in life he wanted to accomplish."

These answers indicate understanding of the theme and give evidence of bringing both intellectual and imaginative powers to play in interpretation, although they do not include quite the detail evident in this response:

The poet fears death before his work is done. He doesn't want to die before his ideas are all on paper in books and before he has had a love for a longer time and has had love returned to him for that time.

³In preparing the material for presentation here, spelling errors and some punctuation errors were corrected, since some of the protocols quoted are from students whose writing is poor mechanically and stylistically, and there is no reason to make the reading of a paper an exercise in deciphering. Other errors were not corrected, and the original meaning was preserved.

Many simply respond "death," an answer which is assigned a Category III designation. The statement, "The poet fears dying without someone loving and remembering him," is difficult to place since it results in only a partial answer to the question; it was relegated to Category II, which is usually reserved for greater originality.

The students' preconceived notions sometimes get in their way, as in the response which says: "I think he fears to be without love because he talks so lonely." A stock response seems to be an easy way out for the student who replies, "Nothing but fear itself," a statement which seems typical of the type of cut-and-dried responses found by Berelson and Steiner⁴ to be present in the reactions of the less creative individual more than in the creative's work. It should perhaps be remembered, however, that many phrases which sound trite to older readers may still seem new and fresh to a junior high school student who may just have "discovered" a hackneyed expression.

Another student misreads, "The poet is afraid of losing his fame and wealth," missing the negation in "nothingness."

These answers range, then, from those students who bring to their understanding of the theme a literal interpretation of fear of death, to those who conceptualize both the

⁴Op. cit., p. 299.

death and loss themes. At the other end of the scale, a few students see only the loss theme and substitute their own ideas of loss of love or loss of material wealth and fame for the poet's fears.⁵

Not unexpectedly, the chi-square analysis indicates an association between these answers about meaning and quartiles of the reading skills section of the SAT.⁶ The evaluation categories assigned to this long-form answer show a statistical significance at the .01 level when compared by chi-square techniques with the quartile divisions of the paragraph meaning and word meaning sections of the SAT. The association of these categories and the quartile divisions of the language section of the SAT or with the CTMM is not statistically significant. Table 1 presents data on answers. The long-form answers are associated with short-form answers at the .01 and .05 levels on the following two questions:

⁵Choice of quotations from the protocols, which may be questioned in regard to coverage may, of course, give a different total impression from that which other readers might derive from reading the total number of responses. In this regard Richards's defense of his selections in Practical Criticism is fitting: "I can only say that I have been on my guard against unfairness. I ought to add perhaps that the part of the material least adequately represented is the hovering, non-committal, vague, sit-on-the fence, middle-body of opinion. I would have put in more of this if it were not such a profitless reading." (p. 16)

⁶Cf. p. 4., supra. This question is one which the theoretical framework posits would show a relationship to reading factors.

Table 1. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Overall Understanding; Meaning: The Theme of Fear, based on Selection VIII.

Question Number	Level of significance of association with:					Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	
L VIII 1	.01	.01	---	---	---	---
S VIII 2	---	---	---	---	---	---
S VIII 3	---	---	---	---	.05	---

*The even-numbered long-form questions were not administered to the second-year group.

- VIII, 2. Night seems to fill the poet with a very special kind of vision in which he does which of these?
- a. Writes a story he has seen in the clouds.
 - b. Is afraid of shadows.
 - c. Feels as timeless as the stars.
 - d. Sees a story but realizes that he will not live to write it.
- VIII, 3. When the poet speaks of standing alone on the shore, what does he probably mean?
- a. He is on the beach at night, looking at the stars.
 - b. He is in a crowd on a beach, but he is lonely because he is going to die.
 - c. He is a young man, looking over the life that he will never have time to live, not a real sea.
 - d. He is an old man, and the sea is his life.

Not significant are the associations between the short-form answers for the two questions above and the SAT and CTMM quartile designations.

This lack of significant association between the short form and the CTMM and the SAT may indicate that the answers to the short-form questions are not so directly related to language skills as are the written answers. Writing may be more closely related to the language skills because of its greater dependency on fluency of expression.

Although there is no statistical significance to the difference between the scores on the CTMM and the SAT and the answers to VIII, 3, this is one of the six short-form answers showing a significant sex-related difference. With a level of significance of .05, more than one-third of the

boys select the designation of an old man, which only twenty-three per cent of the girls choose. The boys' answers show more scattering than do the girls', with forty-two per cent compared to sixty-one per cent selecting answer d.

There is also a percentage difference between the responses chosen by the high creative-high intelligence group and those chosen by the entire class. On S VIII, 2, of the high creative-high intelligence group, seventy-nine per cent select answer d, in contrast with sixty-three per cent of the entire class. Of the creative group, seventy per cent name the same answer. These percentages are shown in the statistical summary in Appendix C, Table C.5.

On VIII, 3, the third answer is the choice of sixty-four per cent of the creative-intelligent segment and of sixty per cent of the creative group, but only fifty-one per cent of the total test population make the same selection.

Apparently, therefore, some factor common to creative students gives more certain interpretation to these two questions. The factor is evidently not a function of intelligence or reading and language skills, with measures of which these short-form answers are not significantly associated.

Meaning: The Theme of Death

The answers to the question on the second poem, "What do you think the poem is about?" develop more fully

the idea of death as students grapple with the problem of meaning as it is contained in the images of the poem. Creative subjects seem freer from the stereotype of death as horrible, or as Getzels and Jackson phrase the approach, "more willing to toy with elements and concepts."⁷

One girl's response discusses that theme, without clearly defining the something to which she refers:

This poem is written to make you feel that death is not as terrible as it may seem, but there is something sweet about dying and that there is something left after you are gone.

Death here seems to have lost its terror, but the students often do not explain why, saying simply such things as, "In a nice way a person dies," or "it explains when something is dying and what is felt." Still not definite, but having a slightly clearer picture is this response, which does explain the use of the figures: "The poem is talking about death and eternal life for all things. Using these as examples [the music, rose, and violets] it tries to explain human death and afterlife." Interpreting the poem even more figuratively than the poet may have intended, one girl's response is,

⁷Cf., p. 11, supra. It is interesting to contrast the attitude of these students with the statement about the more typical attitude of adolescents toward death as given by Leta S. Hollingworth: "Adolescents often suffer greatly over the problem of death. This is probably because now for the first time they fully grasp the fact and something of the nature of death." (Psychology of the Adolescent [New York: D. Appleton and Company, 1928], p. 159.)

I think the poem is about death and the things that linger on with loved ones after death. For instance, "music, when soft voices die," suggests that memories of a person's laughter and joys stay after the person's voice has gone from soft to death. The memories of a sweet, fresh girl or child would be sickening violet and memories of her freshness stay with her lover. Memories of a sweet "flower" (person) or a "rose" linger on when she is dead and rose leaves, the memories of the flower, are left. "When a person is dead, love will still be with them from their lovers and from the dead to their lovers" is the main idea, I think, of the poem.

Another concludes a similar exposition by saying, ". . . the love and memory or the thought of that person is always there even though the person may not be," while another mentions the idea of what happens when flowers die and then adds, "But most important [is] what happens to us [when we die]." This metaphorical view, synthesizing the statement of the theme with the view of human life, is one of the highest orders of creative thought.⁸

Compared with later poems which have more symbolic expressions of the theme, the second poem is rather direct in its statement about death. Although some of the students see in the poem only a pleasant description, most of them sense the deeper theme. Perhaps because they feel death is far away, many of these young people can respond to the idea of death lightly, without a shudder, even being able to create another pleasant image of death: "It makes me think of autumn when the leaves are coming off the trees but the

⁸P. 5, supra. (Bruner). Cf. William J. J. Gordon, Synecletics (New York: Harper and Brothers, 1961), pp. 105 ff.

people are still light-hearted." Death is something that happens to old people; even the sonnet, "When I Have Fears" does not seem to them to be the outpourings of a young person's soul. This idea seems to be clear in the following statement about the second poem: "It tells of the quiet death of an old man, how his love stayed with him all the time."

Closely tied to the theme of death in many of the responses is the theme of love, and one of the clearest explanations of this perceived relationship is given in a paragraph which brings in some contributions of the student's own rather didactic and hedonistic thought:

The poem tells me that everything that lives has to die sometime. You should not be afraid of death because it will call on you someday and you will not be able to escape it. Trying to tell you that death may call on you any day and you should live out your life happily, instead of worrying about it, because it cannot be escaped.

But over love, death has no power and so love will live on in the hearts of all living things, forever, until eternity.

This ability to synthesize is related to cognitive ability, and hence to intelligence, as well as to the creativity factors cited by Bruner and by Berelson and Steiner.⁹ Hollingworth posits that such reasoning process is hardly possible until the subject has attained a mental age of 12, below which point she says, "The intelligence is not

⁹ Pp. 17-25, supra.

sufficiently developed to reason independently or with long sustained effort."¹⁰ Thus, while such synthesis may not be correlated to intelligence across the whole range of ability and age, there seems to be a mental maturity level below which it is not likely to function.

Perhaps because of the heavily philosophical content of the answers more than for the difficulty of making out the meaning of the poem, the categories assigned the answers for this question show a significance of .02, .05, and .01 when compared with quartile designations of the paragraph meaning, word meaning, and language sections, respectively, of the SAT and a .01 significance with the CTMM. (See Table 2.) The short-form question which asks the literal meaning of the poem employs three poetry excerpts and one pair of lines containing as exactly as possible the meaning of the poem:

- II, 3. Which of the following lines seem most nearly to express the same idea as this poem?
- a. All that we wish to stay
Tempts and then flies.
 - b. Beauty will live on in some form;
You will live in my thoughts of you.
 - c. When I arose and saw the dawn
I sighed for thee.
 - d. The woodland violets reappear;
All things revive in field and grove.

The answers to this question do not show a significant association with quartile designations of the paragraph meaning and language sections of the SAT or the CTMM, perhaps because

¹⁰Op. cit., p. 151.

Table 2. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Overall Understanding; Meaning: Fear of Death, based on Selection II.

Question Number	Level of significance of association with:				
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex
L II 3	.02	.05	.01	.01	---
S II 3	---	.01	---	---	---

Other Questions and Level of Significance

Year

three-fourths of the students taking the test select the answer b. A slightly larger number of those in the upper quartiles on the CTMM and these two SAT sections choose the same answer. The answers are related to the quartile designation of the word meaning section of the SAT at the .01 level of significance. Here, however, the relationship is negative because slightly more of those in the third quartile choose the "right" answer than do those in the top half of the group, while the chief difference comes in the fourth quartile, in which only fifty-five per cent select answer b. Statistical data relevant to these questions are shown in Table 2.

Only in the groups separated as high creative and high creative-high intelligence are the choices clear-cut. Here one hundred per cent and ninety-three per cent, respectively, select the second response, so that in this regard the question is highly discriminating, in spite of the fact that the overall number choosing the same answer is quite high.

Meaning: Literal Interpretation

Another question included to find the effect of literal meaning asks the student what the poet of "Rhodora" is trying to say. This theme is perhaps the most difficult to understand of any of the poems. Some Category III answers define a general theme of the poem without application, saying that the poem tells "how beautiful the woods can be" or asks "why things happen" while others generalize

a theme from a scene: "He is telling us of the flowers blooming after a spring rain." One phrases the question asked as, "How did all the beautiful things in the world get here?" which is assigned to Category I, and another says the question is,

Why does something so beautiful as the Rhodora in a damp nook waste its beauty on the earth or sky, or what is it doing in the woods where no one sees it or notices its beauty?

A few generalize, such as the girl who sees the question as,

. . . why the beautiful Rhodora was made and why it was found on the earth for people to see instead of in some Heavenly garden, where only immortals could see its beauty. I think also that the author was wondering why any beautiful things were put on the earth for people to see, and why people could see beauty in them.

A few others become didactic or expect didacticism, as,

I think he is trying to tell us why the plants and such were put on earth, what was the power that put them there, and why waste its beauty on the earth and sky since people don't treat it right and . . . why not live forever, never dying.

Or another makes a conservation lesson, "I think the poet is trying to answer someone's question about the plentifulness of our land and the people wasting the things that come along."

A number of students sense the essence of the meaning in the most-quoted lines from the poem, but it is unlikely that they were already familiar with the quotation; one response using the quotation says,

I think that the question that the author was trying to answer is best expressed in this line, "If eyes

were made for seeing then Beauty is its own excuse for being." I think the author was trying to express his feeling for his ignorance of the great power of God and he tries to tell of his feeling for the beauty of his kingdom which is there for everyone.

Beauty is the key to the theme and meaning for this student who paraphrases the beauty quotation:

The author is trying to explain the beauty of nature using the beautiful example of the Rhodora in the woods. The power that brings someone to see these things is beauty. He is saying how a beautiful Rhodora can give life and more beauty to a desert or to woods. But wherever the Rhodora grows there is beauty. Beauty is its own excuse for being. Also he is saying that if there were a barren ugly place, give it a flower and it becomes beauty. Also any place with life can't be ugly.

Synthesis of the explicit question and the implicit one is in the following statement, which seems to be one of the "intuitive leaps" in meaning: "The poet is trying to explain the reason for man's existence on earth. He may not be sure how man came about on earth, but he is trying to explain the reason why."

When the test was administered the rhodora was identified in a note as a flower. Perhaps the next student did not observe the explanation; certainly he didn't understand the literal meaning, probably thinking the word a name, since he says: "I think that it is wondering why the two people met, and what brought them together." Other students have somewhat the same misreading, but one thinks there is a girl in the poem as well as the flower. This confusion may

possibly have arisen from the apostrophe to Rhodora, which employs "dear" as part of the expression:

I think that this man is talking to his girl. I don't necessarily mean physically. They possibly could have been separated, and he, being quite bewildered has been walking. Then he wanders to the place where the flower is, and, as I interpret it, she had also been walking and chanced upon the same place. He doesn't know what it is that brought her there, but he supposes that she happened there by the same way he did.

The explanation seems logical, and unlike most misreadings accounts for all the "loose ends."

Relatively few students give such a clear and forthright statement about "Rhodora" as the one which says simply,

The author was trying to explain why beauty was hidden instead of being brought out in the eyes of every-day people.

A three-fold statement made by one student summarizes the themes of the poem as being,

- a. Why there are such beautiful things on this earth?
- b. How beauty adds to the world and creatures.
- c. God created many beautiful things. The thought that perhaps the flower and man were placed, equally beautiful, on earth by the same power.

Chi-square techniques applied to these answers indicate a highly significant association between the categories assigned to the long form of this question and the achievement and intelligence test instruments, all being significant at least at the .01 level. As a question of meaning, this part would be expected to show some relationship to the measures of reading and intelligence. In addition are the factors, common to all essay answers, of verbal fluency.

The related questions on the short form of the instrument are as follows:

- V, 3. Which of these sayings about beauty seems to be closest to what this poet says?
- a. A thing of beauty is a joy forever.
 - b. If you get simple beauty and nought else, You get about the best thing God invents.
 - c. That beauty exists is enough; it is not necessary that it always be seen and appreciated by someone.
- V, 4. Which question do you think the poet seems to be trying to answer in this poem?
- a. Who planted this flower?
 - b. What worth has beauty if no one sees it?
 - c. Does beauty need anything more?
 - d. Is it better to be beautiful than good?

The long form categories are related to the short-form answers to number 3 at the .05 level of significance, but the relationship to number 4 is not significant. As Table 3 shows, neither short-form answer is statistically significant in comparison with the achievement and intelligence instruments. On V, 3, responses of the high creative-high intelligence group are about evenly divided among the response items, perhaps partly because these responses are in themselves poetic instead of purely factual statements of the theme. The high intelligence students accept, by 58 per cent, the more factual c. On question V, 4, the high intelligence group responses are divided. The high creative and high creative-high intelligence groups select b by 70 per cent, but the high intelligence students divide 58 to 42 per cent between b and c, with b answers roughly proportional to the group as a whole.

Table 3. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Overall Understanding; Meaning: Literal Interpretation, based on Selection V.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L V 2	.001	.001	.001	.01	.001	S V 3 .05 ---
S V 3	---	---	---	---	---	L V 2 .05 ---
S V 4	---	---	---	---	---	---

Word Meaning

The meaning of a whole paragraph or a longer section often depends on the understanding of one word. The sixth poem is misread by the student who has a hazy or incorrect definition in mind for preliminary. He may have a partial understanding of the term and his missed definition will lead to an extension of the misreading to other questions, as in these two answers by the same student:

- VI, 1. I think preliminary means little. In the poem it means little things. Things of not very great importance.
- VI, 2. I think he would like raindrops, the dew on the morning grass and little flowers in the spring. I think he would like these things. They are important but they are small and simple, and I think he would like them.

This student somehow senses the broader meaning of the word, however, perhaps from the context, and supplies an answer for the third part which seems based on a more accurate understanding of the word: "VI, 3. I think a good title for this poem would be 'Before.'"

Or, building on the context, the reader may go even further from the original meaning, thus building a poem of his own that the writer did not intend. This type of error permeates some answers, all by the same student:

- VI, 1. Preliminary in this poem means little everyday happenings. Things that are just taken advantage of.
- VI, 2. He would probably like the wind blowing through the trees, whistling and screaming.

Also he might like the river flowing gently down and around the bend. The noisy murmur and bubbling it would make when on its endless journey. I think this person would also like to go on picnics in the woods just to observe nature. He would like these things . . . every-day happenings which are almost always just taken advantage of.

This definition leads, in turn, to the title, "The Simple Things that Mean So Much."

Since dictionaries were available, it is interesting that only slightly over half of the students answering the question gave a full and correct definition. Perhaps they thought they understood the word from context and did not bother to look up the meaning. In some cases the problem lay in inability to express the meaning adequately. In these cases, the examples given in the next answer, which asks for what the author would like, often show that there is understanding. A direct definition is occasionally followed by an answer that is in itself poetic:

VI, 1. It means "before the most important part."

VI, 2. The autumn leaves just before they fall. The spring crocuses. The buds of the flowers, such as tulips, iris, etc. Because these all contain the elements of beautiful hope for a lovelier future. They all are the preliminaries to something still more beautiful.

This last answer, with its image of autumn leaves, illustrates one of the pitfalls of writing items for a test which purports to measure creativity. The short-form question 6 and its response items read:

- VI, 6. If a fourth stanza were added to the poem, which of the following would be most appropriate to the theme?
- a. A walk through the woods in autumn.
 - b. A description of a beautiful flower garden.
 - c. A listing of foods the poet likes.
 - d. The countdown for a rocket launching.

The student who responds that the author would like "autumn leaves just before they fall" could be expected to choose foil a, which she in fact does, rather than the foil that would ordinarily be thought of as preliminary, d. Thus the highly creative student here takes a tangent, while the more pedestrian follows the more common meaning and reaches a more "logical" conclusion.

In spite of this problem, however, scores on long form VI, 1, and short form VI, 1, show associations at the .05 level, and scores on long and short forms VI, 2, are associated at the .02 level. Long form VI, 2 and short form VI, 6, are associated at the .001 level.

In comparison with the achievement and intelligence tests, the first question of the long form is associated only with the word meaning section, at the .05 level, although there is significance at the .02, .001 and .02 levels, respectively, between the short form and the three parts of the SAT and at the .01 level between the short form and the CTMM. The association of part 6 is at the highly significant .001 level with the paragraph and word meaning sections and with the CTMM and at the .02 level with the language

section. Scores on every question about this poem are associated with scores on the instruments at a highly significant level. Thus, the selection which seems to most students to be one of the easiest on the test, and which was named as difficult by only ten students, seems most closely connected with the factors tested by the standardized instruments.

Although the answers to the definition question S VI, 1, are significantly related to the test variables, the creative group answers to this question show understanding of word meaning equal to the high intelligence group, and the high creative-high intelligence group's answers were higher than any other segment. On S VI, 2, all members of the high creative-high intelligence group and about four-fifths of the high creative and high intelligence students answer "Getting ready for Christmas," while almost a third of the total test population choose "Writing about his experiences" as the thing the author would enjoy most. On the fifth question the creative subjects choose "My Favorite Things," along with the majority of the total group, while both the high creative-high intelligence and the high intelligence groups select "Anticipations." On the connotative meaning question, VI, 6, almost one-third of the creative group suggest a stanza on "A walk through the woods in autumn," while more than eighty per cent of the highly intelligent students in both groups prefer "The countdown for a rocket launching." The reason

for this difference may lie in the divergent thinking of the creative student, as discussed above (Page 72).

This question is also statistically significant in sex-related responses; more girls choose the rocket launching, while the boys favor a listing of foods the poet likes or a description of a beautiful flower garden. Perhaps they are thinking of the subjects usually covered in a poem rather than a related subject; at any rate the sex-difference is greater here than it is for the question about the meaning of the word, which is also statistically significant, at the .05 level. These factors are shown in Table 4.

Character Analysis

A third essential in making out the meaning is the understanding of the point of view, which is often as important to an understanding of the matter of the poem as is literal understanding or word meaning. Modern critics have referred to an attempt by the poet to remove his own personality from the scene of the poem by the creation of a fictional observer to establish point of view. Vachel Lindsay seems to create such a fictional personality in the minds of some of the students, who respond variously to the first question, "What kind of person would see things in the way the poem describes them?" Possibly the most direct statement says simply, "A wise old Indian chief." Another explains the process by which he decides the character is an Indian:

Table 4. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Word Meaning, based on Selection VI.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L VI 1	---	.05	---	---	---	S VI 1 .05 S VI 5 .001
L VI 2	.001	.001	.05	.01	.05	S VI 2 .02 S VI 6 .001
L VI 3	.05	.02	---	---	.01	S VI 4 .02 S VI 5 .01
S VI 1	.02	.001	.02	.05	---	L VI 1 .05
S VI 2	.01	.001	.01	.001	---	L VI 2 .02
S VI 4	.02	.001	.001	.001	---	L VI 3 .02
S VI 5	---	.001	.01	.01	---	L VI 1 .001
S VI 6	.001	.001	.02	.001	.01	L VI 2 .001

.01

.02

.001

This poem speaks of an Indian girl, the high gray plain, a wounded deer, and spirit cliffs. So it seems as if it is an old Indian in the western plains who seems to worship the sun.

A creative reason for the assignment of the character to an Indian is found in this answer:

An Indian would give such a description. An Indian has great feeling toward the beauty of nature such as sun, rain, and flowers. He would know all that beauty through his tribe life and treasure its memories forever. If he was ever kept in prison or other ways to stop him from seeing it, he would not ever forget the beauties of nature until he died.

Still another answer suggests several possible character types, including an Indian; it might be, it suggests,

. . . someone close to nature, who spends a great deal of his time alone; a brave on a lone hunting trip, a shepherd faithfully watching his sheep at dusk with the cool air beginning to settle on the open plain. A cowboy sitting by a campfire, gazing around at the end of his day's long ride over the prairie. A western atmosphere.

Although a great many students suggest that an Indian point of view is to be found in the poem, many of them seem to think that the poet himself, rather than some fictional character, is Indian. Typical of this type of response is the following:

The person who saw things this way would be, first of all, a person who loves nature and knows it well. He would have a poetic nature, and be a bit superstitious. He would believe in spirits. He would have a merry joyous nature. He might be an Indian, or part Indian.

Many of the students mention the necessity for imagination, observation, love of nature, and interest in everyday things, all seeming to be identified directly with

the poet. In a number of the answers the students identify as typical of the creative artist the characteristics that have been outlined by scholars as attributes of the highly creative person. Whether the most creative of these student-thinkers also see the artist as a model of their own self-image and seek to develop in themselves these characteristics is, of course, problematical. Nevertheless, some have seemed to say, in a less sophisticated way, the same things about connectedness, imagery, and vision that critics and scholars since Plato have observed. They have, in short, formulated a kind of esthetic theory of their own, of which this protocol is an example:

I think there are two kinds of people that would see things in the way this poem describes: 1) An artist, or painter, because he is used to interpreting things that he sees into a finished picture, and so I imagine he would in his time see many things the way a poet does, who is my second person. 2) A poet would see things this way because he always looks for the imaginary in things he sees, or something that reminds him of something else.

The function of the poet and his use of metaphor are mentioned by many students. Working from this fact, one student arrives at the figure of an Indian, but his reasoning operates on a basis of going from the unknown to the known:

The kind of person that might see things in the way this poem describes them might be a poetic dreamer who describes all unknown things by things that are familiar to him. The things mentioned in this poem that are familiar to the writer, such as an Indian or a wounded deer, seem to suggest that the writer was associated quite closely with nature and Indians who lived by nature, perhaps an Indian himself.

The apparent simplicity of the poem, possibly, causes some writers to think of it as a children's poem, written from the viewpoint of a child. Others see a "teen-ager" or a young girl. To these observers only a young person exemplifies the joy they see in the poem, as this protocol says,

I imagine this person as a young, energetic person. A young person who is pleased with the world and everything about the world is right. He sees things through rose-tinted glasses and enjoys it very much. This young person sees the world as a beautiful thing where everything is how he wants it. This person is an imaginative person who uses his imagination a great deal and really enjoys life. He always sees the pretty and exciting part of life, not the dull, uninteresting part.

Others have apparently considered this aspect and rejected it, sometimes giving their reasons:

I don't really think that the person saying this poem could be a child. A child doesn't see things this way. He thinks of an Indian not as an Illinois tribe's princess but a whooping, hollering, painted Apache.

It is more likely, to me, that this is someone who has much leisure time. Most likely it is an elder person who as he sits in his gently swinging hammock watches the sun rise in the East and take its trip across the sky to the West. Each verse in the poem is a highlight of his day.

Others combine the joyous feeling of the first of the poem and the more somber close by creating a story around the skeleton:

The poem gives a feeling of a person aging. The beginning is a young, rosy, child who brings joy to the family. Mid-morning and noon tell of a child growing up and all the ideas he creates for his parents and all the things he does. The sunset is a mature person who builds a new life with his own family.

One response, though very poorly written, seems to present the question that a number of students face in deciding between youth and age for the character:

This person is either young, full of joy, or it is a very old man and happy with the life he had and is telling how he got older by describing the sun. . . . The beginning is when he is born. He's full of life and is adventurous and finding things. Mid-morning is when he's full of pep, joy is a ball of fire. He's proud and strong with youth. Noon, still mid-morning but even more so. Sunset: He's old and not as fast and is dying and as the sun goes into the sunset so does he. In Noon he is just getting a little bit tired.

Many of the students describe the poem with strong visual images, beginning with the strong but rather generally stated descriptions, including,

This poem makes me see the different phases the sun goes through as it travels across the sky. From the light, red rays "in the beginning" to the crimson rim on the earth's horizon at sunset.

Other students are quite specific in the creation of the pictures of the poem, including several which bring in tactile and kinesthetic images as well as visual; some of these include the Indian as part of the image, but others are more matter-of-fact transcriptions of the sun without the character of the Indian:

This poem makes me see the sun at dawn when the world is fresh and the sun is red; at mid-morning when it is a big ball of fire drying the dew; at noon when it is high and slow moving; and at dusk when it is crimson and looks as if it is settling down to rest.

The sun image is dominant in this protocol, but the personification is almost equally present:

It makes me see an Indian lying under an old maple tree thinking about the sun. In the morning he sees the sun's beauty, that of a young maiden. In mid-morning he sees heat, drying and burning everything in sight. At noon he sees the strength of the sun, as in a spirited deer. At sunset he sees a wise sun, like his Indian chief, guiding and teaching.

Some students create strong images with themselves at the center:

It makes me see spring in the west. I would wake up in the morning and see all the flowers and birds singing. Then I see myself in the hot sun of the afternoon when it's hot and nothing to do. Then it comes night and the sun goes down and the temperature cools off and the day passes slowly.

Some students read into the lines their own experience to such an extent that they do not follow the clues. For example, one answers the question, "What does the poem make you see?" by saying, "This poem makes me think of the times when I am out in the woods or out west in the plains in the day alone." His answer to the first question shows the limitations imposed by his own experience: "I think a person who appreciates the outdoors would have written this type of poem. This person likes to think of simple things." The same student, when he has greater esthetic distance in his interpretation, has produced some of the most creative answers to the later poems. Here, however, he lets his

experience, although limited, interfere with the full play of his imagination.¹¹

Another student, who later mentions her own travels through Wyoming, California, Arizona, New Mexico, Utah, and Colorado, sees only the rather generalized figure of a "tourist touring the Southwest," indicating that experience has interfered to the extent of causing a generalization which gets in the way of further thought.

Many students see in the cycle of the sun the symbol of other cycles, from the strongly visual student who sees "an Indian village during the whole day and their various activities," to the student who generalizes: "This poem makes you see life and death, a beginning and an end. It makes you understand nature and find what life is about." One of the most detailed statements of the symbolic life cycle says,

I think an old person with lots of outdoor experience would write this. Using the sun as himself he shows the stages of his life. In a way it is a simile [metaphor had not been discussed by the class] comparing himself with the sun, the sun with animals. In the Beginning is from birth to high school. Mid-morning is from high school through college. Noon is his middle life; he is married and maybe injured. Sunset he is retired and spending his last years in comfort.

¹¹ Richards, who notes unevenness in the writing of his students, so that some who show great insight in reading one poem are less than successful in understanding another, speculates that the blame may lie with fatigue, experience, or other undiagnosed difficulties.

Several others see an historical aspect to the symbolism, saying, " . . . I think this person had some sympathy for the American Indian and the poem is suggestive of the death of the Indian," or carrying the symbolism out verse by verse, such as,

This poem makes me see many things, one of which is the history of the U. S. "In the beginning" makes me think of the period just before white man reached the New World. The only people living here were the Indians. "Mid-morning" makes me think of man's travels across the continent. "Noon" makes me feel the Indian's side of the white man's destruction. "Sunset" is the representation of today's world.

A didactic departure to the question, "What does it make you see?" gives this idea:

. . . It tells me how wonderful the different times of the day are. It makes me see that on a Saturday morning it is better for me to get up and enjoy life in all times of the day. It gives you a better idea to when and how the sun looks at different times. I think that it would give a blind person, who has never had the opportunity to see it and what a beautiful job it does at all times, . . . one of the best descriptions of the sun that could be told.

In the extension of image to symbol there is always the problem of creating a poem that the poet did not intend. How much of the cycle symbolism, for example, is to be accepted as use of the creative imagination, and where do we begin to think of such extension as the result of gross misreading? The attempt to sustain the image of the young girl from the first of the poem to the end, for example, seems to result from misreading, showing the immature student's attempt to find the "story" in everything he reads.

In the beginning the poem shows the girl waking up. The girl is happy for a new day. Mid-morning as she walks along none could be happier. Noon she is still happy, but she is kind and gentle to people too. Sunset--she is tired and is drifting away in a deep sleep.

Although it would be hard to establish, the truest indication of the immaturity of outlook of the girl who wrote this protocol seems to lie in the phrase "kind and gentle to people." The immature girl wants her heroine always to be kind and gentle, no matter what the other qualities she may have in order to fill the role required. Other people may have the quality, too, but the model for the young girl must be kind and gentle.

Another example of gross misinterpretation seems to stem more from the student's lack of understanding of the function of science than from a lack of understanding of the poem, although he is not clear about the meaning of the poem, either. At any rate, his idea of dying away is closer to the metaphor of the poem than to the scientific fact. He says that the person would be

. . . an astronomer, a sun studier. This person thinks of the sun and all life as dying away at the end of the day, then coming alive the next morning to start the day over again.

Thus, we have moved in the responses to one selection from the rather direct process of ferreting out the meaning by determining the point of view, to the imagery of the poem, to the symbolic application of the image. Although the two forms of the instrument were designed to cover approximately the same ideas, the suggestive power of the items cannot be

discounted. A number of students perceive the "Indian" quality of the poem and mention it in their responses, but eighty per cent give the Indian answer on the multiple choice form of the test. Perhaps for this reason there is no statistical significance to the relationship between the two forms. There is statistical significance at the .05 level only in the association between the response to the imagery-invoking question, "What does the poem make you see?" of the long form and the fourth question on the short form, which reads:

- I, 4. Which of these statements about the picture in the last part of the poem seems most appropriate?
 - a. It does not match the second part, which mentions plains.
 - b. It helps visualize a wide plain with the western side ending at a cliff.
 - c. It shows that the scene described is of a valley in the mountains.
 - d. It is not very effective because who ever saw a red nest?

This short form answer is associated at a statistically significant .05 level to the paragraph meaning and language sections of the SAT. The third question answers, dependent on both literal meaning and imagery, are also associated with both the reading sections of the SAT, but there is no statistical significance in the relation between the first two questions of the short form and the achievement tests and only a .05 significance between question 2 and the CTMM.

Response to long-form I, 1, is associated with the SAT word meaning section at the .05 level and the language

section at the .02 level; it shows a .05 level association with the CTMM. Long-form question 2 shows association only with the language section, at .05, and long form 3 is associated with paragraph and word meaning at the .05 level and with the CTMM at the .02 level. Table 5 shows these associations. It is interesting to note that the questions showing the lowest association with the factors usually connected with reading and mental ability are those which depend primarily on imagistic analysis.

The high creative-high intelligence group are unanimous in their choice of "An Indian" as the answer to the first short-form answer. Of the high creative group, 90 per cent and of the high intelligence group 84 per cent make the same choice. Both high creative-high intelligence and high intelligence groups select the title "A Day in Indian Country," but more than twice as many in the high creative group select "An Indian Summer Day on the Prairie" as choose the shorter title. The group as a whole choose this title also, although only 42 per cent vote for it, the same percentage as that in the high intelligence group to select the same title, although 47 per cent of that group vote for the other choice.

As Table C.5 shows, the high creative, high intelligence, and high creativity-high intelligence groups do not differ from each other in answers to I, 3, and I, 4, and on the former the relation to the group as a whole is close;

Table 5. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Character Analysis, based on Selection I.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L I 1	---	.05	.02	.05	---	---
L I 2	---	---	.05	---	---	---
L I 3	.05	.05	---	.02	.02	S I 4 .05
S I 1	---	---	---	---	---	---
S I 2	---	---	---	.05	---	.02
S I 3	.01	.01	---	---	---	---
S I 4	.05	---	.05	---	---	L I 3 .05

on the fourth question about the poem the selected group agrees with the group at large, but there is less scattering of the scores.

Narrative Meaning

Supplying an Imaginary Incident

A rather familiar type of writing for eighth graders is the narrative form, another element closely connected with the literal meaning of the selection. Three questions require the students to draw on their imaginations to build or to expand an incident, and a fourth asks them to interpret an incident. Two of these original incidents are often closely associated in the protocols with character analysis, and the third serves largely as a frame for sensory impressions. The narrative discussion will necessarily quote answers that are also part of another analytical mode, and character and narrative will therefore be handled together for the two prose selections, with the sensory impressions being strong elements in the composition for three of the narrative frames.

Some students take Eugene's picture of himself as the way Eugene actually acts or the way he thinks about himself. Others recognize the dream-frame idea on the reading, but in writing about the selection slip back into taking literally what the author says about Eugene's thoughts.

Such loss of the point of view leads to interpretations such as the following:

Eugene is a boy who must be young and a little shy. He must be a mischievous little boy to pretend that he did not know where the place was or what the lesson was about.

In some cases such a literal interpretation leads the student to identify Eugene with another person, perhaps the very kind of person Eugene himself dreams of being, but again the distinction between the dream and reality is not noted:

I think that in one way he is like Abe Lincoln, strong, heroic, brilliant and coming from a backwoods school. The other kind of boy he is is a dreamer, in love with a girl that has carrot-colored hair.

Many students are quite sympathetic and analytical in discussing Eugene's actions, saying, " . . . He tries to act stupid to get his teacher's help. He also tries to act like a man," or referring to why he needs the teacher's attention: "He wishes his teacher would help him like he imagines," or explaining the cause for his action as an inadequate home life: "I think he is not a spoiled brat . . . trying to get attention; he is a problem boy that nobody loves. He thinks he has to be superior to all the other boys by acting off." A number blame his parents for what they consider his feelings of inadequacy: " . . . I don't think he has very good parents, because they could get Eugene to have more confidence in himself if they were good

parents." This self-confidence, another seems to feel, might come if he could be superior in some way: "He can't get enough love from his family so he tries to get it from the teacher. He wants to be a hero so everyone will look up to him. He is in one word insecure." Others sense that he feels superior already and therefore is more sure of the teacher's attention:

I think Eugene would be an immature boy who would lack love coming from either of his parents. I think he would imagine that he would get this love that he is lacking from his teacher. He would feel this way because he thinks his teacher is kind, warm, and understanding and also a good substitute for his missing love. He feels that he is better than the others of his school and feels he has a good chance of winning the teacher's heart.

Many of the students think of Eugene as being immature; a few credit him with having unusual insight; several feel that his imagination, especially the failure to face reality, may lead him into trouble, but one thinks he will change: " . . . I really don't think he's going to grow up like that. It would be nice and glorious and all that rot, but I doubt, if he is human, that he will keep his 'sight.' "

In their freedom to see into the boy's action, lack of rigidity, and seeking "an ordering principle" for understanding the selection, these protocols exhibit, in varying degrees, the characteristics of creative individuals. This question about the personality of Eugene is closely tied to

the question asking for a narrative frame, but the creative aspects exemplified in the answers are quite different.

In response to the question asking them to imagine Eugene at another time, or place, or season, many students simply change the setting to winter and describe the scene in terms of the same action or action appropriate to the season. Others supply action to support the imagery and add a story to support the action. For some, this setting is in a social situation, and depending on the writer, the shy Eugene may emerge filled with punch, as in this protocol:

Eugene would be very excited and nonchalant acting at a party. He would try, probably vainly, to be suave and "cool." He wouldn't bother to smell anything but he would look for some cute-looking girl. The girl would refuse to have anything to do with him so he would patronize the punchbowl for the duration of the party.

Or, in other stories, he emerges filled with further dreams of success:

Eugene felt lonely and scared. He had just arrived at the first square dance he had been to. Nobody rushed up to him to talk like the others.

He could smell the apple cider and doughnuts--fresh and delicious looking. The scent of perfume was in the air. The musicians were warming up and starting to play.

Eugene felt himself being pushed into the middle of the room and being put with a partner. His new-found partner was a dark-haired, blue-eyed, pink-cheeked girl of about his age.

"Do you know how to square dance?" she asked.

He informed her that he didn't. She said it didn't matter, just to follow the rest. Eugene felt her take his hand and all of a sudden he was in the middle of the dancing. There was a hum of voices and laughter as the dance finally ended. Now he was hungry and could almost taste the cider and doughnuts.

Square dance number one was really going to be the turning point for Eugene in the art of fun.

Contrasting with these two rather literal narratives, a few students maintain the dream atmosphere and supply the social situation to match his imagination:

He saw himself dancing around the room like all the other young people there. His partner, a lovely fair face maiden, with dark and lovely features all made into one lovely creature called a girl.

He imagined himself dancing with her and indulging in quiet conversation. Being able to be someone important and worthwhile, not like the unimportant (slob as he put it) that he was then.

He dreamed of being rich and elegant and a part of the world. . . . Now he is the gallant gentleman he has imagined, dancing with the fair maiden and now--departing, the image like a puff of smoke, shattered like glass, disappearing in the whining wind. But--not forever, never forever.

An almost perfect parody of the schoolroom scene is complete even to parallel speech patterns and actions, and the motivation, adult approval, is the same. That it might also be a need-fulfilling dream, in which the father communicates his love for Eugene, is apparent:

He saw himself a strong, heroic, hard-working farm boy, his father's right-hand man. He would be up early in the morning to drive the tractor for his father. He did wonderfully well, and Father praised him, taking his hand in his own big, gentle, brown one. He would say proudly, "Eugene, this is the happiest day of my life!" Later, they would sit on the hard, bark-covered fence rails together, munching cool, crisp, rosy apples, and looking out over the fields of emerald cabbages, to the golden red maple woods, wilting under the blazing noon-day sun. His father would have his straw hat on his knee, his dark hair gleaming in the sun, his handsome weather-beaten face smiling down on Eugene.

A number of students supply incidents for Eugene's imagination that are quite in character with the incident of

the excerpt, both in sensory imagery and in maintaining the personality of the fictional Eugene.

Sometimes Eugene might think of himself as the leader of a group of Mormons across the plains and desert. As the leader he would supply his strong, heroic, brilliant image of himself. He would smell the sweet prairie air and hear the voices of the voyager's children. He would see all the good he is doing and feel a great sense of self-centered pride and responsibility.

Another writes at less length but senses a facet of the "Bruce-Eugene" character that is Eugene's vision of himself in the novel but that is not touched upon in the excerpt.

The protocol reads:

Eugene has a great imagination. His parents probably don't love him very much and make him feel dejected [sic]. To make up for this non-love, he sees himself as a shining knight in armor, much superior than the others.¹²

Another student who senses the "Bruce-Eugene" hero of the novel supplies a frame, complete with anachronisms, of another situation for the dream:

. . . I would imagine him by a stream, with trees scattered around and about. The season would be at the end of spring and almost summer. Then he would probably imagine himself [serving] a King or Prince and he was a gallant knight, who was strong and heroic. He could see himself in a bloody war with thousands of men around. He could smell the horrible smell of the dead, and the smothering smell of the cannons. He could taste the dirt in his mouth, from when the cannons hit their mark or just plain hit the dirt and spattered. He could feel the pain and the agony of wounds and hear the cry

¹²After the writing was turned in, the girl was asked if she had read Look Homeward, Angel. She had not, and was quite surprised that she had happened on the knight image used by the author.

of dying men. Then after, he could hear the cheering crowd praise him.

This incident is not only rich with imagination and imagery, but has elements of the violence associated with creative people by Getzels and Jackson and of the type of situation referred to by Berelson and Steiner as requiring some resolution. A more realistic study, retaining all of the violence, places Eugene in a more modern war:

A good setting for Eugene would be the Battle of Shiloh in the Civil War. He would see the clash between the blue and gray and the blood running cold. He would smell the bodies of dead men rotting on the ground. He could taste the gunpowder in the air and feel the minie ball slam into his arm, breaking it and sticking there. And he could hear the volleys of shots as he lay there on the cold, dry ground waiting for the medics who might come along.

Table 6 shows that the rating categories assigned to L III, 2, asking about the nature of Eugene, are associated at the .001 level of significance with scores on S III, 4, which reads:

- III, 4. From this passage you can get some idea about the real Eugene. Which of these statements describes him best?
- a. He was a little boy who was probably always in trouble and being scolded by the teacher.
 - b. He was always showing off before the girls.
 - c. He was a quiet boy who didn't like school and made up a school he did like.
 - d. He was an imaginative boy who read a lot and thought of himself as the heroes he read about.

There is also a statistical significance of .001 to the association of the categories assigned on this long-form

Table 6. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Narrative Meaning; Supplying an Imaginary Incident, based on Selection III.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L III 1	---	.001	.02	.01	---	S III 1 .001 ---
L III 2	.02	.001	.05	.01	.001	S III 4 .001 ---
L III 3	.05	.01	.05	---	---	---
S III 1	---	---	---	---	---	S III 1 .001 ---
S III 2	---	---	---	---	---	---
S III 3	---	---	---	---	---	---
S III 4	---	.02	---	---	.05	L III 2 .001 ---
S III 5	.05	.05	.05	---	---	---

answer and the sex of the writer. On the whole the girls score better, but some of the best answers are by boys. The short form sex-difference of answers on 4 is .05 level with a number of boys selecting the "didn't like school" answer, although a majority, boys and girls, answer d.

The only answers about the selection associated with the scores on the CTMM are the scores assigned to questions 1 and 2 of the long form, both of which show a significance at the .01 level. Answers on S III, 5, are associated with scores of each of the three sections of the SAT at the .05 level of significance, and the scores on question 4 show .02 level association with the word meaning scores of the SAT.

Categories assigned to the long-form answers 2 and 3 show a significant association ranging from .001 to .05 to scores on each part of the SAT, and L III, 1, is associated with the word meaning and language section scores of the achievement instrument at the .001 and .02 levels, respectively.

If trends indicated here may be followed without suggesting cause and effect relationships, it seems that on those short-form answers dealing most directly with sensory imagery and perception of character, mental maturity and achievement scores are in no way related to the answers. Essay-type answers, depending as they must more heavily on self-expression, even though scored with as little emphasis on

writing and quality as possible, are associated with these evaluative instruments. Another factor, or factors, than those commonly operating in achievement and intelligence tests, then, seem to be operating in this situation.

Not significantly different from the total population's response to III, 2, are the responses of the selected high creative-high intelligence and the high intelligence groups, but the creative group chooses "the persimmons" by a much larger percentage, seventy-five, while less than half of the total population selects this answer. Another difference between the creative group and the other groups is evident in III, 3, in which eighty-five per cent select the dream interpretation as the reason for Eugene's choice of red and gold, whereas a third of the responses from the high intelligence groups choose the more literal interpretation of its being late afternoon.

All but four of the fifty-three students in the selected three groups feel that the author wrote about Eugene from remembering himself as a boy; one-third of the total group scatter their answers among the other foils.

Supplying a Frame for Action

Part of the difficulty in the reading of some poems lies in the fact that the poet shears away story elements that seem unessential to the meaning he wishes to emphasize. To the immature reader some of these difficulties may be overcome if the student can supply his own narrative elements

to the skeleton presented, a technique which seems to be a common one with story-oriented readers. Difficulties to getting the meaning of the poem may often arise from this reading habit. Therefore, the Browning poem, "Meeting at Night," was approached through asking the student to tell what had happened before, why the narrator was coming to the beach, and what might happen next.

The use of the term narrator may have been one of the factors misleading this student, although her general writing style is evidence of further befuddlement:

The grey sea was sleeping and slowly wading as he came to practice his narrating for a show or something the ocean became alive in a way. And he sort of heard these two voices less loud than the two hearts beating to each other.

Frequently such a misreading might cause a question; here it seems simply to indicate lack of understanding of any part of the poem except the visual imagery. (This student fails to discriminate in any way between image words suggesting tactile images on "Rhodora," simply listing words, including such abstract terms as being and there along with a number of questionable image words such as found, please, and brought. The conclusion seems to be that she simply does not have the language facility to understand oral or written expression of the type of these selections.)

A few students expand their answers to discuss why the story elements are left out. One such answer gives these suggestions:

The poet leaves a lot to our imagination because when we find something that happens to apply to us, usually we like it. I don't think it is fair to say what happened, but I can give my opinion on what happened. I feel that this was the birthplace of the author. He has been away for quite a few years and is coming back to his childhood lover. He goes to her house at night, and taps on the pane. She lights a gas lamp and they see each other, for the first time in years.

Several quite matter-of-fact frames seem to fit the details of the poem. One explains the element of suspense by saying that the main character is later than usual:

After a long day in a fishing boat a man is coming to a small island after cleaning fish. He is particularly late this night because of a big catch. He is coming to his wife's parents' home. His wife meets him and all is well as he has come home safely again.

This protocol and the following one give careful attention to clearing up the details, the ordering principle which was found in Barron's artists. This order is found, for example, in explaining that the home was "his wife's parents'," or in that he was "making sure everything was right around the farm" as explanation for the lateness of the hour, in this response:

Before this scene, this person had had a hard day of work on his father's farm. He had plowed many an acre and planted many a seed. He had worked right up till supper, which he had rushed. After making sure everything was right around the farm, he set out by row boat across the bay. It was a beautiful night. When he reached the cove, he pulled the row boat way up on the sand and started walking.

[Later] They walked in the moon light hand in hand, sometimes talking and sometimes silent. Once or twice they sang a song together, a slow, soft, smooth song. When they reached Albert's Cemetery, a group of lone-some rocks on the beach, they sat together watching

the little waves come in and talking of their future hopes and plans. Later, they walked back to her house. He said good night, and a small wind started blowing the sand to and fro. He started walking to the beach once more. She watched him, and as he got farther away, the blowing sand shielded him from her vision.

To these two students, evidently, the excitement of being in love is explanation enough for the "two hearts beating" segment of the poem. Many other students add a storm to the scene as a cause for excitement:

The sea was just recovering from a storm and everything was jolted and startled. The storm turned the peaceful beach into a raging beast. The author was going to a farm house to meet someone he loved. He went to the house and tried to get in unnoticed, probably because the father objects. He was successful.

The detail of why the man was coming by boat is explained in several different ways, including this one:

The poem suggests that there was a sea storm before he arrived. The author had relatives or family or wife living in a cove that only a boat could obtain. After landing he hurries to his house where he finds his family o. k., the children asleep, his wife awake waiting. The lights are not on.

Others have him arriving after a voyage which was plagued by storm or shipwreck:

I think the narrator had been ship wrecked several days before he landed on the beach. He probably had been lucky enough to get in a life boat. He was rowing to the beach which was close to his home. As soon as he reached the beach he took off across the field to his farm. Apparently his wife thought him dead. When he reached home it was dark. In a few minutes he and his wife were united again.

For some readers the violence of the poem is attributable to a war-time setting. This student combines war

and storm, although he allows the sounds to reach a higher level than the hushed tones of the poem suggest:

A storm has just ended and all the surrounding lands are still wet with rain. The sea is grey from all the sand and silt that came down from the meadows. Going to the beach may be a short cut to the farmhouse.

As the narrator reaches the house, a voice shouts its joys and fears. These two people, being either of opposite sex or the same, find joy in meeting each other. They might be in a hideout in the middle of a war fearing the enemy will find them. They cry for fear because of the constant awareness that the enemy is close at hand. To follow this poem you might say they planned an escape.

Such a large number of the students imagine a storm as part of the setting, it seems well to explore the internal evidence to find why they sense the storm. One protocol answers the first three questions about the poem in such an integrated fashion that the second and third parts seem to answer the query raised by the first. For this student, at least, the storm is a reaction to the colors and sounds of the poem, and the sensory images evoked are explained in terms of the violence perceived:

IX, 1. It sounds like there might be a storm coming up. The narrator went to the beach on his way home to his farm. His wife was there alone and he had to get there to comfort her during the storm. The two hearts are joyous when he gets to the farm and they can be together.

IX, 2. The grey sea seems rough and ready for a hard storm. The black land seems fertile, but dark because of the hovering storm. The yellow half-moon seems like death and trouble. A blue spurt of a match seems anxious and fearful. It seems like it had been waiting and waiting to spurt.

IX, 3. You hear the wind howling and the trees groaning in the wind. The waves are slapping viciously against

the shore and rocks. You hear the quick sharp scratch on the pane of the farmhouse window. Then sighs of relief and joy and two hearts beating each to each.

Here the student's perception of violence is so definite that she interprets some images, such as the moon and the match, which might be thought reassuring, as further evidence of the anxiety aroused by her feeling about the storm.

The turmoil that many students see as a storm appears to others to be emotional in character. Perception of this disturbance also seems to be rooted in the student's image conceptualization, which, as in this sequence of answers, he may conceive to be supporting the disturbance. "The man may have been upset about something, depressed. He wanted to sublimate his troubles for the natural things, to prove to himself that life is beautiful." The mood that this student perceives he sees expressed in the color images:

Grey, black: they signify grief or sorrow or regret,
Yellow: melancholy sunlight, sort of depressing,
Blue: hope and perseverance,

and he carries through the idea in the suggestion for a companion poem, which would have "A subject of the man committing suicide because of emotional turmoil. . . . It would be tragic, but believable."

For another student, perception of images does not prevent an even greater misreading, although he mentions the conflict between the story as he projects it and the images he receives.

The man in the poem has had several problems, mostly of the emotional and financial variety. He came to the beach to seek an answer to his problems. When he got to the beach he decided that like the beach he was alone and therefore had no reason for living. At this point he walked up to a nearby cliff and jumped into the sea.

Although this student finds that the colors contribute to his interpretation, some of the imagery interferes with the meaning he has evolved: "The sounds of the whole poem are rather pleasant and don't stay in context with my other interpretations of the poem." He also adds his own interpretation to the kinesthetic imagery: "He feels how pleasant it is to be living in a dream, out of reality. Then he feels pain, relief, and then anguish as he commits suicide on the beach."

The most difficult distinction to make in assigning categories to the answers was often between the actual misreading of a selection and the use of the ideas of the selection as a point of departure. The factor of stereotypes also enters here. How much of the following interpretation resulted from misreading, for example, and how much did it follow the clues and then depart on purpose? "He had done something wrong. He was being chased and was running fast. The person who was chasing him caught him just as the narrator reached where he was going."

Obvious misreading of the matter of the poem leads to assigning the man's reasons for being on the beach to the desire to be alone or to take a quiet stroll to visit a

friend. In some of these cases, the student's own memory of a walk on the beach may interfere with the interpretation, as in the case of the student who recalls:

. . . I get a feeling of relating the poem to my own actions. When I walk on the beach I'm usually alone; this is the way I like it. When I walk on the beach it is usually to escape from something . . . I can be depressed and happy at the same time on the beach. . . .

Other students assign the same motives to the man in the poem, but slip further into misreading by misinterpretation of details such as the lighting of the match:

It seemed like he was upset for some reason or the other. The beach was very quiet, a place to think and be by himself. To add to the peacefulness, so it seems to me, he started to smoke, although it just said that he lit a match. Apparently he was with someone he cared about.

To another, the visit is just the result of a casual decision or the desire for a chat:

The person who is walking along the beach is probably strolling around, taking a night walk. Before he came to the beach, he probably ate dinner with a cozy fire close to him and then decided to visit a friend.

Such misunderstandings as those expressed in the last two protocols indicate that the students miss the excitement and urgency altogether, perhaps because their own ideas of the beach as a quiet relaxing place get in their way as they read the poem.

The categories assigned these essay answers are associated with the language and word meaning sections of the SAT and with the CTMM at the .001 level of significance.

Contributing to this level is the fact that more students give incomplete or sketchy answers to questions about this poem than to any other selection; usually students in the lowest quartile on the intelligence and achievement instruments tend to have the greatest number of incomplete answers on any type of question. The short-form question most closely connected with this item, however, is number 7, which reads:

- IX, 7. What kind of story seems to be suggested by this poem?
- a. A love story
 - b. A spy story
 - c. A war story
 - d. A poem of emotion without a story.

Answers on this question are not related to scores on any section of the achievement test or on the CTMM. It is interesting to note in this connection that about forty-nine percent of the respondents indicate that they think of the selection as a love story and about thirty-nine per cent choose the "emotion without a story" designation. Among the creative group eighty per cent choose the love story designation, and those in the high creative-high intelligence group are seventy-one per cent on record as selecting a love theme. The high intelligence group is much nearer the group designation: sixty per cent think of the poem as a love story; thirty-two per cent say it is a poem of emotion without a story. Table 7 shows the chi-square analyses of associations between these answers and various other factors.

Table 7. Chi-square analysis of answers to questions about Understanding of Literal Meaning--Narrative Meaning; Supplying a Frame for Action, based on Selection IX.

Question Number	Level of significance of association with:						Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance	
L IX 1	---	.001	.001	.001	.01	S IX 1 S IX 7	---
L IX 1	.001	.001	.001	.01	.01	---	.01
S IX 1	.001	.001	.01	.001	---	L IX 1	---
S IX 2	---	.05	.05	.01	---	---	---
S IX 6	.05	.05	---	---	---	---	---
S IX 7	---	---	---	---	.05	L IX 1	---

The sex breakdown is significant at the .05 level of significance. Fifty-seven per cent of the girls and forty-two per cent of the boys select the love story category; three per cent of the girls and fourteen per cent of the boys think of it as a spy story; three per cent of the girls and four per cent of the boys say it is a war story, and thirty-four per cent of the girls and forty-three per cent of the boys find it a poem of emotion rather than a story.

An individual breakdown is also relevant here. A number of the more mature boys in the class expressed interest in the poem both orally and on the written evaluation form, saying that the poem was "cool" and that they would like to read more of that selection. Several of these expressing greatest approval of the poem select the love story designation; generally on the follow-up evaluation, the proportion of boys choosing this selection as their favorite far outnumbers the girls, and an overwhelming number of these think of it as a love story.

On the other hand, most of those who say on the follow-up form that they consider this selection the hardest place it in the category of a poem of emotion without a story, although a few rank it as a war or spy story. This seems to indicate, though the cause-and-effect relationship is not suggested, that those who view the selection as a rather abstract, broadly emotional poem find it difficult and often are not interested enough to try to find further

meaning; those who see in it the thread of a story begin to unravel the plot and are interested in carrying out the hints until they have satisfied themselves that they have attached some meaning to the selection. Many of the students who select the piece as one about which they would like to know more are socially and emotionally quite mature, but many are not those usually thought of as the "best" readers in the group. It also seems interesting that this group is preponderantly male.

Statistically, these figures add up to a sex-related difference on the short form answers at the .05 significance level, and on the categories ascribed to the long form answers to a sex-related difference at the .01 level of significance. In this case, at least, the difference seems to be in perception of the poem rather than alone in language-related skills.

Summary of Discussions About Meaning

The importance of the student's comprehension of meaning has been stressed in Part 1 of this chapter. Although meaning is but one part of the perception of the poem, it is basic to an understanding of the total poem, which includes the "complex of attitudes" that Brooks identifies.

The essay answers discussing meaning have centered around three questions about theme, one about word meaning, One about character analysis, and two requiring the subject

to compose a narrative or a narrative frame. Protocols on these questions have disclosed insights into the mode of thought of the writers as well as their ability to get the meaning of the selections. Summaries of the responses to the short form questions indicate something about the manner of response of the students in the groups selected as high intelligence and high creative.

Although the question about the theme of fear is one of literal meaning, the structure of the poem is built around the symbolic and figurative meanings of the two sustained images. On this question (S VIII 2) the high creative students do as well in deciding the theme of the poem as do the high intelligence students, indicating that the factor of mental maturity does not seem to be any more important in understanding this rather difficult poem than is imagistic ability.

Similarly, the theme of death in the second selection is perceived by all but two of the students in the three selected groups, with all those in the high creative segment giving the same answer. Many in the total population are also able to select the item showing understanding of the theme, however, as three-fourths of the students taking the test do.

The understanding of literal meaning of the fifth selection is measured by two short-form questions. In the case of the first of these (V, 3) the two creative groups choose

the more poetic statements of the theme, with responses of the high creative-high intelligence segment being roughly divided into thirds. The high intelligence group selects the more prosaically stated literal meaning.

Although word meaning is a factor of reading, which is usually related in turn to intelligence, on questions about the interpretation of word meaning (selection VI) the high creative group's responses are generally comparable in percentage to those of the high intelligence group. One exception is in the choice of "My Favorite Things" as a title by the creative group in contrast to the choice of the two intelligent groups of "Anticipations." This choice may be a reflection of the creative student's feeling about the poetic qualities of the title suggestions, or it may be simply that the creative individuals do not have as clear a notion of the meaning of the words preliminary and anticipation.

Many creative readers supply their own ideas of symbol in their interpretation of the character of the perceiver in the first selection. This symbolism as well as the literal meaning may contribute to the selection of the title. Almost two-thirds of the high creative group select "An Indian Summer Day on the Prairie," with less than half of any other group selecting the same title. The "Indian" quality of the poem, which was evident in the protocols, is found in the responses of four out of five of the total responses. Even here, however, the high creative and high

creative-high intelligence groups' answers show a higher percentage of selections of the item "An Indian," although the high intelligence group responses are closer to the answers of the total population.

The two questions requiring the respondent to supply a narrative frame for the story (selections III and IX) offer opportunity to observe the results of the students' own imagination, freedom from rigidity, violence, and application of order. The emphasis in many of the protocols on Eugene's need for understanding may be found also in the short-form responses which emphasize his imagination and the author's use of his own memory in describing Eugene. That few of the students accept the dream sequence as the literal meaning is indicated by the small number selecting the item which identifies Eugene as probably always being in trouble and being scolded by the teacher.

The ninth poem, about which the other narrative was built, is the most difficult of the selections for most of the readers. The indications are that those who see the story in the poem do not think of it as difficult; those who think of it merely as a "poem of emotion without a story" find it hard to follow. The differences between groups on this poem show that much higher percentages of the two creative groups designate a story than do the high intelligence and total groups.

In dealing with literal meaning, therefore, the creative individual seems best equipped to understand those selections, or at least to respond to those questions about the selections, which place some importance on structure through figurative and symbolic meaning and on the character and the narrative elements that may be suggested in the selection. He seems as well equipped as the high intelligence subject to deal with questions requiring insights into character, particularly if the selections demand insight into why the character acts as he does. Generally, his answers are very different from those of the high intelligence subjects if the questions about literal meaning have some items which seem to be stated more "artistically" than others. In these cases, the high creative student may choose the esthetically pleasing response instead of the more pedestrian "correct" response.

Part 2

Imagery

Imagistic Analysis--Visual Imagery

The second factor listed by Richards in understanding a poem is the problem of image perception. Not only is it important as a means of "getting at" the matter of a poem; many critics consider the image to be the principal matter of the poem. "Images in verse are not mere decoration, but

the very essence of intuitive language."¹³ The psychological explanation given by Valentine assigns to literary imagery the role of " . . . a method by which some readers attune their mental organization to the balance of tendencies in the poet's mind." He therefore urges development of imagistic response "for those who have neglected to use an existing capacity for imagery."¹⁴

Although many critics have used symbol and image as synonymous, for purposes of analysis image is here defined as "the result of the evocation, with varying degrees of clarity, of mental reproductions, representations, or imitations of sense perceptions."¹⁵ The responses to these poems were projected as a means of discovering something about the evocation of images on the part of the reader; hence several approaches to the matter were employed, including asking for lists of things the character in the selection might have perceived, lists of image-making words appealing to the reader's various senses, and questions as to the effect or feeling produced by the different image-making expressions.

There is no attempt to approach analysis of the students' responses by classification according to image types, i.e., auditory-minded, visual-minded, kinesthetic-minded, olfactory-minded, gustatory-minded, or tactual-minded, or to

¹³T. E. Hulme, op. cit., p. 661.

¹⁴C. W. Valentine, "The Function of Images in the Appreciation of Poetry," British Journal of Psychology, XIV (1924), p. 184 ff.

¹⁵Millett, op. cit., p. 47.

attempt to measure strength of image evocation, although psychologists commonly believe such types to exist and the system used by Millett would account for these types. Millett's system of image identification employs sub-categories for visual imagery, with divisions into sight-color, sight-size, sight-shape, sight-position, and sight-movement (or lack of movement). Closely related to color but actually in most cases a separate sub-category is yet another visual image type, sight-brightness.

Color Images

Analysis of color perception on the essay questions is of two types: in some cases wording of the question calls specifically for searching out the colors; in others, the question simply asks for a description which the student may describe in color or not as he wishes. The multiple choice form asks for a count of sight-brightness words, for a reason for the choice of colors used in one selection, and for the effects of color in another poem.

Some students evidently sense the color imagery without employing color images of their own in discussing what they see. One boy uses a great many sensory images of various kinds throughout his total paper, but his use of color images is limited to brightness and contrast and general color words. Yet in discussing the character of Eugene he says,

. . . He sees color in everything. . . . He would always be thinking about color and probably couldn't stand a black and white television set. He would always wear bright colors.

A girl picks up the color imagery in describing Eugene in her imaginary scene:

He would probably see things in a circus as everything bright, gay, and colorful. The objects would be all oranges, cherry reds, purples, and soft pinks. He would, most likely, notice things that others wouldn't: the orangy nose on the clown's face, the bows on the pony's mane, the harsh wrinkles on the elephant's trunk, and perhaps even the soft plinking sound of the high wire as someone footsteps cautiously onto it.

The girl's description is much more specifically filled with color, and her perception of the red tones of the original has been cleverly transferred to her own imaginary scene, but the boy seems just as aware of the colors in the matter he has read.

Other students supply the colors when they discuss the scene involved in their perception of the first poem:

When I hear this poem I think of a large clear meadow surrounded by trees and large gray mountains on the west. The sky is beautifully blue with a few white cirrus clouds scattered around. The season is nearing autumn and some of the trees are starting to turn and the grass is an old green. . . .

This student senses the autumn feeling in his own color imagery in such a way that he is close to the Indian Summer Day which the poet describes but which he identifies specifically only in the title.

Another student begins her description with the meadow, but her grass and mountain do not suggest specific

season and have less character, lacking as they do the color images of the previous excerpt: "This poem makes me see a meadow, with green grass and a stream trickling down from the close-by mountain . . ." Another student evokes brilliant light images, as well as the color images of the sunset:

It makes me see the fiery sun at sunrise, rising through the East, spreading beauty. Like a young huntress, it touches everything impartially with arrows of lovely light. It makes me see the sun at Midmorning burning away the clouds of dawn. It makes me see the gleaming, flaming sun at noon, dominating the sky. It makes me see the sun nesting atop of the piled pink and gold clouds, like an eagle on its nest.

Affective Nature of Color

The affective nature of color is an important aspect of the use of color images in any literary selection. Many students do not list fiery as a color image in the color words of the Browning poem; otherwise the lists of colors, as would be expected, are largely the same. The second part of the question, however, has great variation in the answers about the effect of the colors, from the straight matter-of-fact statement of what the color describes, such as in this reply: "Grey is mentioned to describe the dark ocean. Black shows that the land is dark with shadows. Yellow is the color of the moon. Blue is the color of the match;" to a statement which serves itself to evoke images:

Some colors that are mentioned in the poem are grey, black, yellow, and blue. "The grey sea" gives a dreary,

lonely feeling. "The long black land" gives a dark, lonely feeling also, but it is not as foreboding as the grey sea. The yellow half-moon gives a cheery, comfortable feeling. "A blue spurt of a lighted match" gives me the impression of a light in the darkness, a lonely place filled.

Individual colors evoke different moods in different individuals. Grey, for example, to one student "gives the effect of a cold deep sea," to another it means simply, "nighttime," while to a third it gives the "feeling that the sea is quiet now and peaceful, like it has gone to sleep for awhile." To still another, "The 'grey' sea gives me a feeling of loneliness. When you say a sea is grey it makes it sound large and ready to swallow you up."

Black brings similar statements: "it gives me the feeling that there is a strip of land going for miles around the sea. The land is beautiful, but yet dark and sad." To another it brings a strong visual image without as much suggestion of mood: " . . . speaking of long 'black' land, you can almost see it rolling along in the darkness."

The contrast of yellow moon is felt by some, who simply say "gay," or "to describe the mood of romance," or others feel a personification, "the moon is a light yellow shining down on them as if it was smiling. Such a gay pretty face that lightens up the Earth, and makes the sea shine like yellow wheat."

Blue is used "to describe a feeling," which the student does not specify, or it is "mysterious," according to another.

A number of students speak of the total effect: "A gloomy, mysterious effect. It reminds you of forbidden, much desired things. It gives a dreamlike, hazy effect, too."

The changing mood is emphasized by a number, such as this one that includes kinesthetic response as well as visual: "He sees the sea in a drab way, but as he gets closer to his destiny, everything gets sharper. His whole body seems to do the same."

Earlier quoted protocols showed how a number of students depend on colors to indicate the direction the narrative should take, even to the extent of forecasting suicide because they feel that the mood established by the colors calls for such a drastic remedy, and how others, disregarding the clues that they feel in the colors, read the action of the poem itself amiss. The affective nature of color, then, serves to tie together the elements of narration, mood, and description, becoming, as Brooks believes the image to be, the "structure" of poetry.¹⁶

Several students in discussing the contrast approach the wording of the statement of the question about color on the short form of the instrument. One summarizes, "The contrasting colors give you the feeling that you are warm, cold, sad, happy, etc."

¹⁶Cleanth Brooks, The Well Wrought Urn (New York: Harcourt, Brace, and World, 1947), p. 194, et passim.

Perhaps the students' own perception of the images is most clearly evident in the statistical relationship at the .01 level between the categories assigned for the long-form answers and their responses to the question from the multiple-choice version:

- IX, 3. How do the colors mentioned in the poem contribute to the effect of the story?
- a. Colors are bright and happy, reflecting excitement.
 - b. Colors are dark and somber, reflecting fear.
 - c. The colors contrast the moon and its reflection on the water with the dark colors of night, showing two moods.
 - d. The colors are just added details which are pretty but are not necessary to the story.

This version does not show any relation between scores and the scores on any part of the achievement test or on the intelligence test.

Almost two-thirds of the students select the third item, "showing two moods," and the percentage varies little from one quartile to another on any of the multiple-choice comparisons. A much larger number of those assigned to the second category, the creative, on the long form, select this answer, however, with over seventy-one per cent choosing it. Categories assigned to the long form are associated with scores on the paragraph meaning and language sections at the .02 and the .05 levels of significance.

Table 8 summarizes the responses to questions about the affective nature of color.

Table 8. Chi-square analysis of answers to questions about Imagistic Analysis--Affective Nature of Color, based on Selection IX.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L IX 2	.02	---	.05	.01	.01	S IX 3 .01 ---
S IX 3	---	---	---	---	---	L IX 2 .01 ---

Visual Images of Abstractions

Other visual images drawn by students seem often more vague than the color images, but some students evoke visual imagery suggestive of Titchener, who claimed that no matter how abstract the word, he could create a visual image of it.¹⁷ One student, for example, says, "This poem [number 1] makes me see peace. . . . This poem makes me see dreams and feelings."

Others are very specific, but their images seem to draw more on their memories than on the poems: "I think of a girl on a rocky beach looking over the water. The wind is blowing and she has on a scarf and a silk dress which is being blown by the wind."

Since this response was written to poem number 1, which does not mention a beach, the student was asked about the image. She replied that in her imagination she always thought of a girl on a beach, and that the girl's dress and hair and scarf were always blowing behind her. The same student ignores the possibility to expand an actual beach scene in number 9, but she places Eugene in a windy place, too:

I think of Eugene in a field on a breezy fall day. He smells the moist autumn leaves and sees beautiful colors that autumn brings. He feels the moist leaves also while he sits near a pile of fall leaves . . .

¹⁷Titchener, op. cit., p.6, passim.

Such complete departures are rare among the protocols, but evidently at least this student carries her own visual image which she more or less superimposes on whatever material she happens to read, complete with a model of the ideal girl.

Earlier quotations of statements about Eugene stressed the color imagery. Other students arrive at the same idealization by a more abstract, though still visual, route: "He would see that the trees looked like bridesmaids in a wedding . . ." says one girl in describing his imaginary scene, while another recognizes that Eugene is living in his own bright world:

. . . I think he'd have an enormous imagination and would see things more beautiful than they really are. He'd probably think of everything more beautiful and sweeter and everything gay and happy.

Sight-shape and Brilliance

Visual imagery of the sight-shape type is most clearly evident in response to "The Secret Heart," intermingled with sight-brightness images and symbolic use of the heart image. One student describes part of what he sees in these words:

. . . It makes me see how in the middle of the night when the father struck the match it looks like a great light. It makes me see his father's hands with the match in them and how they look like they're glowing by themselves. . . . I can see how the man's hands look like they were full of fire and how they looked like a heart until the match went out.

The readers may misinterpret some of the details and still understand the basic image. One student understands it

to mean both, " . . . the way the man had his hands shaped, to remind him of a heart . . ." and " . . . The silhouette of the hands on the wall resembled . . . a heart, with the light seeping from behind it, the glow of the father's love."

One student shifts points of view, trying to see the scene as it might appear to each of the participants, and at the same time achieving a perspective of looking in on the scene.

When the boy grew up, he could see his father clearest in his memories as he had stood in the very quietest part of the night with a light in his hands making sure the boy slept peacefully. The little boy wasn't quite awake as he saw his father standing there in his bedroom with the match he had shielded with his hands which were curved in the shape of a heart. This seemed to him to symbolize his father's love for him. In this I see the boy and his father in the dark room and the father with the light in his hands. I see this through the boy's sleepy eyes and also the heart-shaped hands. Through the father's eyes, I see the boy, evidently sleeping. I see the father's face tender with love in the light of the match. I see the darkness when the match burns out . . .

If the description of the scene fails to "come off" completely, the attempt at least shows the sight images that the poem evokes for this reader.

These answers (long form IV, 1) are associated by the categories assigned with scores on the paragraph meaning section of the SAT, with a significance level of .001. The short-form question most closely related asks,

- IV, 3. This poem mentions the word "heart" four times. What does the word refer to as it is used in the poem?
- a. The father's real heart.
 - b. The father's real heart and the

- heart-shape made by his hands, which stands for his love of the boy.
- c. A paper valentine heart the boy had made for him.
 - d. His face which was heart-shaped in the light of the match.

Over eighty-nine per cent of the students select b, with the distribution from the highest quartile to the lowest on the paragraph meaning section showing some interesting internal variation. There are slightly more of the second quartile (94%) than of the first quartile (91%) who pick the second answer, and slightly more of the fourth quartile (87%) than the third quartile (85%) who make the same choice. Even without this tendency, there would probably have been no significance between the scores on the achievement and intelligence tests and the answers selected here. The summary of information about these responses is shown in Table 9.

There is a significant association, however, between the number of light words that the students perceive and scores on each of the standardized instruments, ranging from the .001 significance level on the language section to the .05 significance level on the CTMM. Here forty-seven per cent indicate that they find five to eight words suggesting light or darkness and forty-one per cent say that they have found nine to fifteen light-image words. Students in the upper quartile on each of the instruments show a much higher percentage, finding nine to fifteen images, with fifty-five per cent or more in every case indicating this count, while

Table 9. Chi-square analysis of answers to questions about Imagistic Analysis--Sight-shape and Brilliance Imagery, based on Selection IV.

Question Number	Level of significance of association with:					Other Questions and Level of Significance	Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex		
L IV 1	.001	---	---	---	---	---	---
L IV 2	---	---	---	---	---	---	---
L IV 3	.01	.05	.01	---	---	---	---
S IV 2	.02	.02	.001	.05	---	---	.01
S IV 3	---	---	---	---	---	---	---

in no case does a similar percentage from any other quartile indicate this choice. The factors leading to language facility, as measured by the achievement instrument, seem more closely related to the ability to select the brightness-image words than are general intelligence factors. The association of the answers and the achievement test sections indicates further that this ability to select brightness-image words is also more closely associated with the skills that are measured by the standardized instruments than are most of the sight-image questions; it has been noted on other questions based on image-perception that other factors than linguistic or reading skills seem to be operant. In a tally of words, however, reading skills seem to assert their importance.

There is a statistically significant difference between the number of light-image words tallied by the first year group, who wrote the long-form answers to this question, and the second year group, who did not have the long form. About forty-eight per cent of the first year group indicate that they have found between nine and fifteen light-image words; about thirty-seven per cent of the second year group see the same number. The number of those finding five to eight light images is about the same for the two year groups, but fourteen per cent of the second year group to only three per cent of the first year classes report one to four light-image words.

In the groups selected for high creativity and intelligence, by far the greatest number are found by the high creative-high intelligence group, with seventy-nine per cent finding nine to fifteen light-images and the remainder all finding from five to eight images. The high creative group percentages for the same number of images are fifty-five and forty, while the high intelligence group shows almost exactly the same number as the remainder of the first year group, about forty-seven per cent in each category.

Imagistic Analysis--Sound Imagery

In imagery, as in the feeling that Richards was talking about, "We can either just ourselves undergo the same feeling or we can think of the feeling."¹⁸ From the discussion of some psychologists who have studied imagery, some subjects evidently undergo the perception of the image while others think of the image. Some readers evidently not only perceive an image from the particular expression of the author but evidently also add to the scene from their own experience background. In discussing the sound images, for example, one student may feel that he is being much franker to discuss what he thinks some character in the selection might see or hear than he is to speak of the imagery as "I feel . . .," or "I hear . . ." Some of the questions,

¹⁸ Practical Criticism, p. 311. Cf. Valentine, op. cit.

therefore, are worded to ask what the reader himself sees or hears; others ask what some character in the selection might have perceived. In one case these two points of view are placed together, in questions 3 and 4 of the ninth poem, which read,

IX, 3. What sounds do you hear as you listen and read the poem?

IX, 4. What are some of the ways in which the man's senses make him aware of what is around him on the beach? What does he hear? Smell? Taste? Feel?

For some students these questions seem to overlap. To others there is a distinction between first person observations and those of the character in the poem. One student, for example, carefully places hear in quotation marks each time she uses it with the first person, while observing no such careful distinction with see. When asked about it, she indicated that her perception of the auditory images was not quite so clear as her vision of the sight images, and she felt it was more honest to indicate the different perceptions in this way. A few others slip into the second person as a substitute for the indefinite pronoun. One description which indicates the "undergoing" of the image stays rather close to the specific images suggested by the poet:

In this poem I hear the lapping of the sea on the beach and on the prow of the boat. I also hear the scrape of the sand on the bottom of the boat when it hits land. Later I hear the tap on a window pane. Just after this I hear the scratch of a match being lit. At the end I hear a soft voice, happy to hear the narrator returning.

One suggests the difference in his own observations in reading the poem and the sounds heard by the man on the shore, saying,

First, I hear a man rowing a boat with all his might with waves slapping the side of the boat. Then I hear his boat hit the sand and he jumps out and pulls it farther on to the beach. I can hear the sound of the surf against the beach. The man starts running across the sand. Then he comes to grass and, breathing hard, continues on. He jumps a few fences and enters a barnyard. The chickens fly up and make noise. The man walks up to the window and strikes a match. Then he sees what he was after and breathes a sigh of relief.

To this is contrasted what he believes the man in the poem would observe:

The man is slightly afraid and crazed because he must get to the farm [previously it has been explained that the man heard his love was sick or hurt]. He hears, sees, smells, and tastes only what is necessary to get him to the farm.

Yet another, who gives a rather full description of his own image perception, refuses to delineate what the character might hear or otherwise perceive, saying, "I have no way of knowing."

Another suggests by the change of sounds the man's progress from the shore to the farm.

I hear the waves leaping at the sides of the boat. I hear the dip of the oar in the water as it nears the shore. I hear the grit of the slushy sand against the bottom of the boat as it is pulled up on shore. I hear the swish of the grass and the scuffle of feet on the sand as the man walks. I hear the call of a seagull, and the distant lap of the waves on the beach. The man is walking through the fields and on the soft dirt, barely making a sound. I hear the breeze through the trees and the rippling of the grass and grains in the field. I hear the quietness, then the quick tapping on

the pane. The strike of the match. I can almost hear the heart beats of the two friends as they see each other's faces.

The same student who was quoted earlier about a "fixed picture," has a vivid sound image also, although the adjective used to describe the voice may not be accurate. The bringing in of his own experience as a listener suggests that the image is of the "undergoing" type, although it may be somewhat fuzzy:

I hear the waves beating against the shore. I hear the slushy sand going back and forth on the shore and I hear a sullen voice talking. The voice sounds like the ones on TV when you're half asleep.

Another student, who speaks of the affective nature of the image, suggests differences in her own perception levels and tries to analyze ways in which the image might be made clearer:

I notice a general hushed, peaceful, and at the end, joyful one. All the words sort of blend and give a silent, sleepy sound. The voice seems to be whispering to you, and trying to tell a secret.

I hear the " . . . startled little waves that leap . . ." as I read the poem. I can hear the slush of the sand as the poet " . . . gains the cove with pushing prow . . ." I can hear the tap at the pane, and the quick, sharp scratch of the match being lighted. I can hear a voice expressing "its joys and fears . . ." and I can almost hear the " . . . two hearts beating each to each." This noise is not quite as easy for me to hear as the others, probably because it is worded and written differently. If it were worded something like the following, I could hear the beating more easily:

"And the quick, excited beats of two hearts." This sentence does not give the same meaning as the other one, however.

The poet's ability with picture-making situations is often pointed out by readers and critics as consummate

artistry. The handling of sound images, often ignored by critics, may be just as useful a measure of mastery of his art. Browning's skill in the use of imagery, for example, is nowhere better illustrated than in the way in which he uses sound images; the absence of mention of sound for many lines in "Childe Roland to the Dark Tower Came," it has been noted,¹⁹ suggests absolute silence. One student notes this technique of contrast with silence in the Browning poem of the test:

At first you hear the sea washing against the sand and then the squishing of wet sand under his feet. You then hear his feet hit the dry grass in the field. You can hear the scratch of the match, the only sound in the house.

Such observation of omission is often a clearer measure of the reader's image perception than would be his mere recognition of an obvious factor.

Categories on L IX, 4 show association with the selection of statements about the sounds in the poem on the short form (IX, 4) at the .01 level of significance. Percentages of those in Categories I and III who select the second statement, "The quiet whispers show the peaceful setting," are nearly equal at about forty-three per cent and forty-four per cent respectively; seventy-five per cent of those in Category IV select this answer. The difference

¹⁹Vi Marie Taylor, Imagery in the Poetry of Robert Browning (unpublished Master's thesis, Department of English, Texas Woman's University, 1951), p. 80.

comes with those whose answers on the long form rate in creative Category II; only one third of these choose the second statement, dividing the remainder of their answers almost equally between the two statements that express excitement, "The low, quick sounds convey excitement," and "The sounds are short, sharp, low sounds which sound very loud to the two people." Again, this seems to indicate that the creative reader sees more plot and action in a poem than to the more matter-of-fact student might seem to be merely a pleasant description.

Scores on the three sections of the achievement instrument are associated at .02 and .01 levels of significance with classes assigned to the third long-form question, but only paragraph meaning is associated (at the .01 level) with categories assigned on long-form question 4.

Answers to S IX 4 are associated at the .01 level of significance with paragraph meaning and language sections of the SAT and with the CTMM. The highest number of those in the upper quartile on each instrument give answer a, although the greatest number of those in the lowest quartile in each case select b. The ability to see excitement may, therefore, be a factor in paragraph meaning, language, and intelligence, or it is possible that the more skillful reader in this case more nearly grasps the intention of the author. Table 10 shows the statistical summary of answers to questions about sound.

Table 10. Chi-square analysis of answers to questions about Imagistic Analysis--Sound Imagery, based on Selection IX.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L IX 3	.02	.02	.01	---	.001	S IX 4 .01 .05
L IX 4	.01	---	---	---	.01	S IX 5 .02 ---
S IX 4	.01	---	.01	.01	---	L IX 3 .01 ---
S IX 5	---	---	---	---	---	L IX 4 .02 ---

Imagistic Analysis--Tactile and Kinesthetic Images

The traditional reference to sight and hearing as the "noble" senses was broken to some extent by the Romantic poets and more recently by the Imagists, but imagery is still often thought of primarily in terms of these two senses. That a rich sensory world lies beyond these two areas is often demonstrated by modern prose writers as well as by poets. Some of Thomas Wolfe's rich tactile and kinesthetic imagery seems to have been grasped by this student and conveyed by his own imagination to another scene about Eugene:

Eugene is in the river beside his uncle's barn. He feels the water cool and soothing on his skin. He sees the deep rich green of the trees and the glistening rock below the surface of the gently-rolling river. He can hear the river flowing smoothly and a few small birds in the trees. He can smell and taste the clean water. He feels the sun warm and drying his skin in contrast to the satin-smooth water. He feels the sensation of floating like a leaf in the air.

This same student complains that he can not find much to appeal to the sense of touch in "Rhodora," but proceeds:

I can find few words that appeal to our sense of touch, but here are some that might be used. "Sea winds pierced our solitudes," "damp nook," "fresh rhodora," "desert," "sluggish brook," have a certain feeling.

Many students list combinations of words which seem together to present a tactual image in response to the instructions in question 1 about the fifth selection, "Rhodora."

One such list includes:

seawinds pierced
fresh Rhodora

damp nook
 desert
 sluggish brook
 purple petals
 red-bird
 black water

Another has a shorter list, but the choices are explained:

May--May makes you feel clean, new, fresh
 sea winds--makes you feel fresh and long for far-off
 places
 damp nook--dark and secluded, sheltered from the rest of
 the world.

In determining levels of perception, which is the better list? How does the evaluator know that such a word as red-bird does indeed invoke a response and is not just added because the student thought the list too short? Or, in the second list, the term damp nook undoubtedly can suggest a tactile response, but the qualifying words used by the student, dark and secluded, seem to suggest a sight image.

Another problem is the affective nature of the image, as important here as it is in the case of color imagery and sound imagery. The imagery must be perceived very vividly by the student who writes, though she lists fewer words,

In this poem, there are many words which make you feel something. In the first line, the words sea-winds pierced makes you feel like the winds are not only piercing the solitude but also whipping against you. In the third line, the words damp nook, make you feel hot, wet, and like you are in a real muggy climate. The seventh line makes you almost feel the breeze blowing against you.

Another student uses tactile and kinesthetic images in each of the other image descriptions as he discusses the

second poem. Under see he also includes a pathetic fallacy of having the green leaves wither "because they know the rose is going to die and have dropped off to make a bed for the rose." Perhaps the idea of death is associated in this student's mind with winter; at any rate thermal images are strongest to his sense of touch:

see Roses are beginning to become brown at the edges of its petals and many of its green leaves have already died and dropped off. As if they know the rose is going to die and have dropped off to make a bed for the rose. The sky begins to gray as winter [draws close].
hear The trees sway as the wind whistles through them, and the crackling of dried leaves as they are blown across the yards. Bush's rustle as the cool, strong wind gently picks off its leaves.
feel I feel the cool winds which tells me winter is just around the corner.

It would be interesting to ask a group of students from an area where winter is less rigorous to answer some of the free response questions and compare the tactile and kinesthetic images with this set of responses. A great many of these students, as has been noted, place Eugene's imaginary scene in winter. In these episodes Eugene's strongest sensory impressions are of the cold and snow stinging his face, or, as one student writes, "He would feel the itch from his wool sweater and the coldness of the hard wood bench that he is sitting on."

In many of these responses, even the visual, sound, and olfactory images are related to the thermal-tactile images as he sees the snow, smells smoke from the schoolroom stove, or hears the wind rustling the trees.

The only question in which the tactile imagery is isolated for statistical analysis is in selection V, where the first question on each form of the instrument is based on tactual and kinesthetic responses. The categories assigned on the long form relate at the .01 level of significance to the list of words chosen on the short form as most directly appealing to the sense of touch or feeling. The scoring on the long form question is not highly discriminating because the ceiling for assignment to Category I was placed too low, so that too high a percentage of the responses fall in the designation. Nevertheless, the proportion of those choosing answer b in the Category I designation is fifty per cent greater than those in Category III who make the same choice.

Significantly associated (.05 level) are the tactile-image word lists from the short form and the paragraph meaning and word meaning sections of the SAT. Although the percentage choice of response b is fairly constant in the first three quartiles for each section of the instrument, the fourth quartile shows a decided drop in the number of students choosing this answer. The question is therefore fairly discriminating as a measure of reading achievement and at the same time indicates rather accurately which students perceive touch or feeling images.

The chi-square analysis of answers to questions about tactile and kinesthetic imagery is given as Table 11.

Table 11. Chi-square analysis of answers to questions about Imagistic Analysis--Tactile and Kinesthetic Imagery, based on Selection V.

Question Number	Level of significance of association with:					Other Questions and Level of Significance	Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex		
L V 1	---	---	---	---	---	S V 1 .01	---
S V 1	.05	.05	---	---	---	L V 1 .01	---
S V 3	---	---	---	---	---	L V 2 .05	---

Imagistic Analysis--Taste
and Olfactory Images

Images of taste and smell are measured as a part of the total image response in several questions and more directly as a distinct portion of several questions. In some of these the mention of odor is quite general: "The fragrance of the flowers is strong." Most of the writers mention Eugene's awareness of the smell of chalk and the autumnal odor of persimmons. A few mention the "pine fresh" woods as an olfactory image; a very small number thinks of "carrot-colored hair brushed his nostrils" as an image connected with odor. In his own scene a student may make only rather general statements about smell, saying that Eugene " . . . would smell the fragrant scent of beautiful spring flowers. The air would have a fresh, clean smell, like spring always does."

Others seem to feel that Eugene's olfactory sense would be more acute, describing the present imaginary scene, " . . . He could smell the pine-smell of the forest and the soily smell of the fields and the stuffy smell of chalk," and adding odors both unpleasant and pleasant to their own versions: "He would smell how stuffy and unclean things were."

One boy, usually a careful reader, says of the Shelley poem, "I cannot smell or taste anything in this poem." Yet he recognizes the need for smell to complete the imagery

of the poem, and says that if another verse were added it should include " . . . feel and smell. I think you ought to be able to smell a light scent of the dead flowers on the breeze and make you feel the sorrow that death has grabbed away the beautiful flowers."

The flowers are specifically mentioned as images of odor in some discussions of the second poem, one saying, "You can smell the violets as they lose their scent," or another says, "This poem doesn't make me see or taste anything in particular. But I feel that there is something in death. I hear pleasant music and smell some kind of flowers."

This student is one of a number who recognize the absence of taste imagery but feel that it would not be appropriate to continue the poem by adding a verse on taste.

Perhaps this rejection of taste imagery as a suitable experience to complete the poem is responsible for the fact that short-form question 4 finds only thirty-one per cent of the responses calling for the hypothetical added verse to be about "the remembered touch of soft velvet and the taste of ripe fruit." Nevertheless, twice as many in the top quartile on the paragraph section of SAT, with scores of which the answers are associated (.01 level), choose this answer as choose it from the bottom half of the group. An analysis of individual answers indicates that those who consider taste imagery inappropriate to the theme do indeed choose other answers, usually "the memory of a happy time," and

although the ones who express such feelings are a small fraction of the whole, perhaps others have considered such a possibility without mentioning it.

The answers are associated, at the .05 level of significance, with the CTMM, where the quartile breakdown by scores is similar, but the top quartile is more evenly divided between the two favorite answers. (See Table 12.)

Summary of Discussions about Imagery

The descriptions of images in the essay answers were among the criteria for assigning categories to the responses. It would, therefore, be anticipated that on questions of image perception the high creative groups' responses would differ from the selections of the high intelligence and total groups. The discussions of Part 2 of Chapter IV have shown that in most respects this position was borne out by the answers. In one type of question about images, however, the answers differ from the expected; on tally-type questions (III, 1, and II, 1) the high intelligence groups indicate a greater number of images perceived than do the high creative students.

In the questions requiring a tally-type of response, it appears that the high intelligence group tends to give the answers that are "expected." The high creative subjects seem to respond less by giving the answers that seem to be "right" or "best." The reader of selection II would have to produce some almost synaesthetic reactions to images to identify five

Table 12. Chi-square analysis of answers to questions about Imagistic Analysis--Taste and Olfactory Imagery, based on Selection II.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L II 1	---	---	---	---	---	---
L II 2	---	.01	.001	---	---	---
S II 1	.001	.001	.01	.01	---	.02
S II 2	.01	.01	---	---	---	.05
S II 4	.01	---	---	.05	---	---

image types in the poem, and answers to III, 2, indicate that about three-fourths of the creative group compares with fifty-eight per cent of the high intelligence group in perceiving persimmons in this way. Yet five of the nineteen high intelligence students select the response which calls for five senses, contrasted with only five of the thirty-four from the two creative groups who select the same response.

The same tendency is evident in another tally in which the count of the number of types of sensory images is used, III, 1. Here, over a third of the high intelligence and high intelligence-high creative students indicate "five senses." Only half as many high creative students indicate "five senses," the majority indicating "four senses." Because answers to other questions indicate that the creative subjects do indeed perceive more images than the highly intelligent students, the desire of the student to give what he considers the "right" answer should not be discounted here. The greater conformity of the high intelligence group over the high creative group is thus indicated in the responses to the short-form questions in addition to the evidence presented in the essay-type responses.

The only tally question in which this tendency is not evident is the one which asks for light-image words (IV, 2). Here the high intelligence group answers are evenly divided between responses indicating five to eight images and those indicating nine to fifteen images. Both the high creative groups indicate more answers in the "nine to fifteen"

category, although only the high creative-high intelligence total percentage is very different from the total group response. Some of the students indicated orally that they included symbolic references to light, such as references to hands, which they visualized as glowing. The differences may have been due to this image perception, or the creative individuals may have perceived more of the negative references (night, dark), as they have indicated in the essay-type answers.

Part 3

Symbolism and Figurative Meaning

Not only must the reader grasp the meaning of the poem from rather direct statements of the theme and sensory images of various types, however; he must also interpret symbols and grasp figurative meaning. Although these poems were selected particularly for the images which appeal to the individual senses, there are also three sustained images or symbols in the poems: the heart image of "The Secret Heart," the mountains-as-people-metaphor of "The Mountains Are a Lonely Folk," and the harvest simile of "When I Have Fears."

The Heart Symbol

The rather involved heart symbolism is understood as a whole by most of the students, who realize that it is "love," or "soul," and "not physical," or "the shape of the man's hands were the shape of a heart, but the heart

symbolizes more than this; it means love." A number of students differentiate the meanings of the word heart as it is used the four separate times, one for instance saying:

1. As the shape of the heart
2. As the way a heart feels things
3. As a heart that gave out a warm glow of love
4. As a candle that was blown out.

A fuller statement accomplishes the same results:

In one place the father's hands were curved in the shape of a heart. In another place it means that maybe the boy had thought of his father as gruff or maybe a little mean but as he saw his son by the light of a match he couldn't help but show "a bare heart on his hidden one." In the third place I think heart means that the love that the father had stored up just burst open and glowed with all the love a father could give. In the last place, I think it means that when the match went out the love that the heart released seemed to cease and the father became the same as he was before.

Although some of the students feel that the poem is sad, since they believe that the son was looking back after the father's death, and although others miss the unique quality of the one-time experience and think of it as an everynight event, almost all the students seem to understand the basic theme of the poem and the fact that the boy saw something of love in his father's face. The boy's response to the love that he saw is variously described by different students, most of whom speak of warmth or security, or a "feeling," as in this protocol:

As the light from the match shone upon his father's face from behind his hand, he saw in his face the great love his father had for them. At the same time he felt a great love for his father which he never knew before and a strange feeling of security.

Some students even use the terms symbol and symbolism: "In real life he saw his father bending over him in the night with a candle. In symbolism he saw his father's love watching over him and the light a symbol of love."

The fact that the students seem to identify with the boy of the poem perhaps makes understanding clearer and is perhaps partly responsible for the fact that although the poem is the most symbolic of the selections, it seems to be best understood.

The effect of identification is clear in the way in which one student switches from the third person to the first person, so that he becomes the boy in the situation:

His dad had lit the match to see if his son was fast asleep. The way he held his palms curved with the redish-yellow spark between them it was a shape of a heart on his chest. I could see the glow that would make me blink if I was awake. It would make me feel warm and wanted. But almost the same instant that it was lit I would see the light flicker out. But it showed me that I was in a safe place with my dad.

The only part of the poem not clear in some minds is the image, "hands held up the sun," which some interpret as meaning the boy thought his father God-like. One girl even says that the boy dreamed that his father was holding up the sun and " . . . it impressed the boy because he couldn't imagine a shadowy figure of a man holding the sun in a dark room." Another reasons that it must have been God who came into the room because he "held up the sun."

In an interesting extension of the symbolism, one student employs a play on the word sire in the poem, saying that in the instant the boy saw his sire as truly his father. Another speaks of the death of the boy's mother, feeling that in the instant the boy saw the "motherly" side of his father's love.

Categories assigned to these answers show no statistical relation to the scores on the CTMM, but answers to L IV, 1, are associated with the paragraph meaning section of the SAT at the .001 level of significance and answers on L IV, 3, and L IV, 4, are associated with the same instrument at the .01 level. Number three is associated with the word meaning section at the .05 level, and both three and four are associated with the language section of SAT, at the .01 and .05 significance levels, respectively.

Short-form questions 3, 4 and 5 have too much grouping of answers to be highly discriminating as a measure of understanding of the symbolism of the poem. On number 4, however, although ninety-one per cent of the answers were d, "That his father loved him in a way that he did not show when he knew that the boy was looking at him," there is a statistical association with the three sections of the SAT at the .01, .05, and .05 levels of significance, respectively, indicating a language-related ability to understand the "heart" of the poem.

As an even-numbered selection, this poem with its accompanying questions was administered in both its forms to the first group of students and in the short form only to the second group. Statistically there is no significance to the difference in the answers of the two groups to the short form, indicating that the second group was able by reading and hearing the poem on the short form only to arrive at the same understanding that the first group achieved. The percentage of the second year students who select the "right" answer is usually slightly higher than the equivalent percentage of the first year group, but the difference is not statistically significant. Table 13 shows the associations.

The only statistical difference between boys and girls on this selection falls in long-form question 3 at the .05 level, which seems to result largely from the larger number of boys whose answers place them in the fourth category, since the percentage of boys and girls is almost the same for the first category.

The Mountain Symbol

The second sustained symbol, the comparison of mountains and people, is treated by most of the students as an obvious figure. Although most of the comparisons drawn between mountains and people are rather general, several of the comparisons become quite involved as students labor, or

Table 13. Chi-square analysis of answers to questions about Symbolism and Figurative Meaning--The Heart Symbol in Selection IV.

Question Number	Level of significance of association with:					Other Questions and Level of Significance	Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex		
L IV 1	---	---	---	---	---	---	---
L IV 3	.01	.05	.01	---	.05	---	---
L IV 4	---	---	---	---	---	---	---
S IV 3	---	---	---	---	---	---	---
S IV 4	---	---	---	---	---	---	---
S IV 5	.01	.05	.05	---	---	---	---

belabor, the idea, such as, " . . . the forests are their hair and the snow is a hat on their heads. They have tearful eyes that are running brooks and mouths that sing as a bird or the babbling of a brook," with an even more grotesque figure in the idea that some mountains "have tunnels winding through them which might compare with our circulatory system." One of these students remembers a story he once read about Mt. Everest:

The story was about its conquest and the story was [told] by the mountain. He was like a country fighting back when someone tries to capture it. His soldiers were wind and snow and he would usually win.

It is easy to see how this boy, remembering such vivid personification, could speak of tearful eyes and singing mouths.

A kind of inverted metaphor is present in one explanation of the comparison of mountains and people:

The author is comparing the mountains with maybe what he thinks an ideal person should be. Standing alone carrying their burdens, not depending on others to do their jobs for them, and doing it without complaint, groan, or sigh. He stands in his place not butting into others' affairs. When a person is said to walk with his head in the sky, you usually think of a proud person who carries himself well, not only physically but through life. If all people were like this it would make life easier and the world better--bolster up the sky.

Most students take their clues more directly from the statements in the poem and find a more direct comparison:

. . . the poem means more when [the mountains are] compared to people. You can compare them as having brows, ordered places, and feet. . . . They are compared to being silent folks and soldiers bold and high.

The long-form question which asks why the poet compares mountains and people is associated with the language section of the SAT at the .001 level of significance and with the CTMM at the .01 level. The more figurative answers to the third question, which asks how people and mountains are similar and different, are significantly associated with sections of the SAT, at .05 on the paragraph meaning section and at .01 for the word meaning and language sections. These categories also are significantly associated with the scores on the CTMM, at .001. The second short-form scores, for another question figurative in meaning, are also highly significant in their association with the SAT and CTMM, with significance levels of .001 for each section except language, which shows a level of .02. Table 14 presents these associations.

The third short form question, which is negatively stated, is based on visual imagery and the sense of identity of the people and the mountains. Answers to this question are associated with the word meaning and language sections at .01 and with CTMM at the .001 levels of significance. The only question on the meaning of this selection for which answers do not show an association with the test variables is short form 4, which is based on the connotative and allegorical meaning. Eighty-two per cent of all students taking the test select the answer which suggests that the mountains, like people, may be lonely. Approximately the same number of those in the high creative-high intelligence group and

Table 14. Chi-square analysis of answers to questions about Symbolism and Figurative Meaning--The Mountain Symbol of Selection VII.

Question Number	Level of significance of association with:					
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex	Other Questions and Level of Significance
L VII 1	.02	.01	---	.01	.001	S VII 1 .01 ---
L VII 2	---	---	.001	.001	---	---
L VII 3	---	---	---	---	.001	---
S VII 1	---	---	---	---	---	L VII 1 .01 ---
S VII 2	.001	.001	.02	.001	---	---
S VII 3	---	.01	.01	.001	---	---
S VII 4	---	---	---	---	---	---

the high intelligence segments choose the same answer; all high creative students answering have the same response.

The Harvest Symbol

The grain comparison of "When I Have Fears" is the most difficult figure for the students to perceive, perhaps because they do not understand garners and many did not look up the word, or perhaps because many give a literal interpretation to the poem, saying something such as, " . . . it means that he was standing on the shore thinking about love, writing, and loneliness and he was alone." Such an interpretation would lead to a comparison of "writing and love" which a number express.

Showing grasp of the simile, but not quite expressing the way the two elements are alike are statements such as, "He compares writing with farming," and "He compares writing and books with rich garners holding the full ripened grain." A rather complete explication is given in these words:

The author compares writing with the activity of the care, cutting, and storing of a grain field. He is gleaning his brain, picking out bit by bit the knowledge in his head like the picking up of the remaining grain after the field had been reaped . . .

Or another states the comparison in these terms: "The writer compares writing with rich garners holding the full ripened grain. Like a brain holding the thoughts just waiting to be used as garners hold the wheat ready to use."

Statistical analyses of the long and short-form answers about the harvest symbolism show some reversals of earlier-indicated trends. Long-form categories (Table 15) show no significant associations with any of the SAT sections or the CTMM. The short form, however, is associated with paragraph and word meaning sections at the .001 level of significance and with the CTMM at the .01 level. The long and short form are associated at the .05 significance level.

Slightly more than half (53 per cent) of the long-form answers to the symbol question were assigned to Category IV, the only answer so preponderantly falling into this misreading category. Even of the top quartile on the SAT paragraph meaning section, the percentage drops to only forty per cent. However, twice as many of those in the top quartile on paragraph meaning wrote answers rated Category I as received that rating in the class as a whole.

The figures for the selected high creative groups, however, are quite different. Only twenty-one per cent of those in the high creative-high intelligence segment wrote Category IV answers, contrasted with fifty per cent of that group who wrote Category I responses. The percentages for the high creative group were thirty per cent in Category IV and twenty-five per cent in Category I, compared with figures of fifty-three per cent of the high intelligence group (the same as the general population) who wrote Category IV and twenty-one per cent who had Category I answers.

Table 15. Chi-square analysis of answers to questions about Symbolism and Figurative Meaning--The Harvest Symbol of Selection VIII.

Question Number	Level of significance of association with:					Other Questions and Level of Significance	Year
	Paragraph Meaning SAT	Word Meaning SAT	Language SAT	CTMM	Sex		
L VIII 2	---	---	---	---	---	S VIII 1 .05	---
L VIII 3	---	---	---	---	---	---	---
S VIII 1	.001	.001	---	.01	---	S VIII 2 .05	---

The symbolism presented in the visual image of standing on the shore, which has been treated in the short form of VIII, 3,²⁰ is evidently a much more easily grasped figure, on which the percentage of those in the total population who were assigned Category IV drops to 13 per cent. The high intelligence answers in the misreading category are 10 per cent, while five per cent of the high creatives and none of the high creative-high intelligence group fall in that category.

Summary of Discussions about Symbol

The student's understanding of symbols in the selections seems to be at least partly a function of his experience. Thus about one-half of the total group fail to grasp the harvest simile and parts of the mountains-as-people figure, although ninety per cent of the students understand the heart metaphor, which is more directly related to the personal experience of the eighth-grade student. Although the answers to certain questions about these sustained images show associations with the quartile designations on the reading and language achievement instruments and on the CTMM, indicating a language-connected ability to perceive or interpret symbolism, the high creative segment does as well in this respect as the high intelligence segment.

²⁰P. 59, supra.

Part 4

Evidences of Other Characteristics of
Creative Individuals

Humor

Although humor has not always been so regarded, Carr, in speaking of a sense of humor and the spirit of intellectual play, says, "The importance of this mental trait can hardly be overestimated. It is the basic root of inventiveness and originality, and it is usually regarded as one of the primal characteristics of genius."²¹ And Patrick cites the usefulness of humor to finding perspective: "The thinker with a good sense of humor is truly gifted, for he is able to view both himself and his work in better perspective."²² It has already been noted that creative people "place a greater value on humor and in fact . . . have a better sense of humor"²³ than less creative people. The creative student ought then to be able to recognize more subtle humor and to respond to it by composing his own humorous story. The excerpt from the story "Pigs Is Pigs" was included principally

²¹H. A. Carr, Psychology, A Study of Mental Activity (New York: Longmans, Green, 1925), p. 151.

²²Catharine Patrick, What is Creative Thinking? (New York: Philosophical Library, 1955), p. 166.

²³Berelson and Steiner, loc. cit.

to study the students' feeling for mood.²⁴ The narrative frames composed by the students show that they catch the fun of the situation, while both the narrative and their analyses of why Mr. and Mrs. Morehouse act as they do have a sort of amateur psychologist tendency. Most of the student authors make Mr. Morehouse a business executive and feel that he isn't really angry at his wife, who just happens to be the one who is around to catch the brunt of his business-caused anger. There is no typical story; the one which follows is an example of what was written:

Mr. Morehouse is manager of the Morning Star, a newspaper in Boyne City. Today for some unknown reason the presses had stopped. And they had had to send the papers to a city 50 miles away to be printed. As a result, the papers were very late, his office had thousands of complaints, and it cost the paper twice as much to print them as it normally would.

Later it was discovered that an Irishman from a rival newspaper, named Danny McDuff, had stuck a splinter of wood in one of the presses and that had caused them to malfunction.

Sammy is responsible for the anger in a number of the stories, one of the most elaborate of which reads:

Well, Mr. Morehouse had got a call at his office saying that his son Sam was at home now because he was expelled from school. And it wasn't really the boy's fault because the Irish principal did not like his son and he had tried this before. So Mr. Morehouse had gone

²⁴ Although this short story is less satisfactory artistically than the other selections, the segment gives a complete incident which is open for interpretation in several ways, depending on the reader's perception of mood. The response items for the short form evidently underestimated the readers' perception in some respects, so that responses do not allow for the variety of responses indicated by the essay answers.

home to write a letter to the school, but his son did not want him to get the ink because he had done it and if it went any farther, like to court, they might find something else that he had done.

The humor shows up also in the description of the character of Mr. Morehouse: "Mr. Morehouse was a jell-u-cell chomping, always right, stubborn-as-a-mule business man. He always had to be right." A request for a translation yielded the information that jell-u-cell [evidently phonetically rendered] is a medicine for people with stomach ulcers.

Although it has been noted that the creative person uses fewer trite expressions than does the less creative, one interesting aspect seems to be the imaginative use of trite expressions and stock plots precisely for humorous effect, as in this setting for "Meeting at Night":

The narrator and the girl met somewhere and fell in love. Her father didn't approve of him, so they were obliged to meet secretly. He came to the beach, because she sent for him to come to a secret meeting in their farmhouse. She came out to meet him. They kissed each other and did the usual things lovers do. She said, "I have sent for you because my father is becoming suspicious of you and is treating me harshly. Take me away with you; let's be married!"

"Darling!" he said, "When shall we go?"

"Tonight!" she replied eagerly. "I am ready!"

An hour later, he and she ran down to the beach, got into the boat and sailed away into the moonlight. They lived happily ever after.

Other touches of fun come from twists of plot in the more serious selections. One brings humor into the Browning poem by the suggestion that the companion poem "could be about them being shot in the farmer's field, when the farmer mistook them for poachers."

Another boy interjects humor, of a rather personal and ironic sort, into his description of Eugene: "Eugene is probably just like me--handsome and brilliant."

Stereotypes

The creative individual, according to Berelson and Steiner, is freer from stereotype than the less original person. At the eighth grade level, the mere ability to recognize one's own stereotype images seems also to be a form of divergent thinking and hence close to the creative impulse. Such an example is the following, which does not come from one of those in the high creative category, however,

The kind of person that wrote this poem would be in my mind a semi-professional poet, male, with little knowledge of science or much care about it. He would be more interested in people, nature, and the arts. He probably would have great disdain for sports. I have a stereotype of poets as skinny, medium-short, glasses, with brown hair and eyes. He would look for beauty in life. He would probably say that he disliked money and material things, but not as much as he would like others to think. He would always look for an opportunity to write a poem.

Freedom from Convention

Another form of divergent thinking is the willingness "to show more independence of judgment and less conventionality and conformity, both intellectual and social." One step in this direction would be to admit that the conventional views would appear less than exciting, especially if the student felt that he was "expected" to have a positive

reaction. Such a statement might come in varying degrees of rejection of conformity, beginning with one which produces the stock answers and then takes issue with them:

The kind of person who would see things this way is a person more dramatic than most people. He feels things and goes for deep and elongated descriptions more than others. He would enjoy poetry very much and get a great deal out of such pieces. He would have a good ability to imagine and compare and understand these pieces. Actually to us (kids average for the eighth grade) he would be a nut and real corny.

Humor is also present in another negative reaction, which has an interesting criticism of the poet and his compunction to write:

I imagine a more young, experienced poet. The poet has had things published and he expects that people expect him to write. I don't think he lives in Illinois or has even been there. I don't think he's seen a deer except in one of the faded "Bambi" cartoons, because I've never seen a deer with baleful eyes. I think he has a more "civilized" imagination and this poem isn't what he likes.

Another student objects to language which he considers trite, and offers language that he thinks would have a fresher approach:

The line "In the Beginning" is old and worn out; it is the first phrase in the Bible. The poem could have been started, "After the dead starlight" or something like that, but not "In the Beginning." I think the sun at noon is in its glory. A wounded deer is timid, a wounded stag would have been better. I think the "baleful eyes" are terrible. The sun at sunset is a kind old man who has lived a fine life and is dying, not a rickety old eagle. The poem does not describe a day.²⁵

²⁵In this connection it is interesting to note that another student sees in the phrase "In the Beginning" a symbolic reference to the creation story in the Bible: "It seems in the first part to give me a feeling of creation."

A fourth negative response begins, "Since I'm allowed to go ahead and give answers that I feel," indicating that he does not intend to hold back, and then, using a beatnik expression to indicate its writer's desire to rebel against conformity, proceeds:

The poem makes me think of more or less nothing. I'm not a naturalist of any type; I dig being alone in the right place, but the sun to me is a matter that possibly happened scientifically or possibly God placed it there. But the poem gives me little feeling besides picturing the setting.

It should be noted, perhaps, that these students are not negative toward all poetry. In fact, they wrote some commentaries in depth on some of the poems, but they evidently felt that the first poem was not deep enough to challenge their powers of perception, perhaps feeling it insulted their maturity.

The next criticism seems to grow out of an entirely different type of reaction, resulting here from the student's attempt to fit the Thomas Wolfe prose selection, number III, into her preconceived notion of poetry. "I think he is an immature little boy, trying to grow up. He is creative at least a little, (that is more than I can say for the author.)" This student appends, in a note after her discussion of the excerpt, this explanation of her feeling: "I think this is a poor example of a poem. The author is crazy. That's why I didn't do too well on this, because I don't have any good feelings for it."

This less creative student is not negative toward poetry; she just expects it to fit certain patterns. Of poem I she writes, " . . . But yet I want to help that wounded deer, grasp those flowers, see the smoldering fire; I want to see the sun shine."

Poetic Diction

One question was included chiefly to show the reaction to poetic diction: "Why does the poet use the double subject (mountains they) in the first line?" [of the poem, "The Mountains Are a Lonely Folk"] This question evoked some very hazy responses, although all seem to be based on the assumption that the line needs the word. Some feel that the rhythm wouldn't be right without it; others say that the poet wanted to give the impression that the mountains were people and the word they helped in the idea. Very few say that the poet was not using good English; although most of the students would have recognized the usage as a "fault" if they had heard it in an everyday conversation, most seem to think that it was done for an effect. Perhaps it would not occur to them that a poet would be less than "correct" in usage; at any rate, no one suggests that he did not know it was poor English.

Although almost half of the students answer the short form of the question about the use of the double subject with the item, "The poet wanted to make the line suggest the

sounds of the speech of the people who lived in the mountains," rather few suggest this possibility in their essay answers. One who does says, "The poet uses double subject to show he is changing a thing to a person. It also sounds like a man in a mountain telling the poem as if he really knows what he is talking about." Another comments on the "common touch" of the grammatical error, suggesting it was used " . . . to make the mountains seem more common because common people would use a double subject."

One boy, whose speech indicates that he might frequently hear the use of the double subject at home, writes, "Oh, I don't know; maybe he was raised in the mountains and the mountains are like his family."

One girl thinks of the poem as "taking place" at some time "when people were not educated in language," without connecting it with a place.

One creative girl indicated in discussion after the writing that she had rejected the idea of the common folk speech because the rest of the poem uses language rather carefully, but another high creative-high intelligence girl says, "I think he is trying to sound like simple country folk without too much learning. Poor grammar used for the right effect." To this student, the personification is double:

I think he refers to a group of people. They seem tall and serene. They are quiet and keep to themselves; raising their children and earning enough to live on is

their main life goal. They care little for outsiders and ignore them when possible.

A further look at the figures on the two forms of this question indicates some interesting contrasts. The answers to long and short forms of this question are associated at the .01 level of significance. Although forty-eight per cent of the responses to the short form are the choice of answer d, almost three-fourths of those writers selected as having the most creative answers on the essay form of the question select this answer. Short form answers are not significantly associated with achievement or mental maturity scores, but the categories assigned the long-form answers are significantly associated with paragraph and word meaning sections of the SAT at the .02 and .01 levels and with the CTMM at the .01 level of significance. The breakdown of the categories assigned the long-form answers by the creative-intelligence groupings is that shown in Plate II.

PLATE II

Group Number	Group Designation	Category Assigned I	Category Assigned II	Category Assigned III
I	High creative- high intelligence	50.00	28.57	21.43
II	High creative	75.00	20.00	5.00
III	High Intelligence	26.32	15.79	52.63

This question may be a discriminating one partly because of the noted greater rigidity of the highly intelligent over the creative subject. The rigid reader may expect that a poem should fit the rhythm established, and he would understand manipulating the words to fit, while the more creative reader may tend to look for other factors than the rhythm, which he may see helping to carry the poem but not dictating its content.

Literary Conventions

Incidental to some of the other discussions has been the occurrence of certain literary conventions, such as the grotesque figures of the mountain metaphor, the pathetic fallacy, personification, and apostrophe elements found in certain discussions and the expectation of the students that certain stylistic devices such as rhythm will be recognized. The treatment of the literary convention by the immature reader is an interesting study in itself, but it is treated here only for the effect that it has on interpretation. The classes of this study had read in ballads the rose-brier figure, and one student thinks of it as the subject of the Shelley poem. She adds another idea about the plants' death, however:

When a person dies and has a lover who also dies the lover is supposed to be buried next to the other lover. A rose and a brier are to grow up and intertwine, but, when they also die they also slumber with the two lovers.

The idea of meeting in death is the basis of the symbolic meaning read into "Meeting at Night" by one student who evidently sees the whole poem in terms of the literary convention: "I think the person in this poem is dying and he will be meeting his long lost lover again. His lover had died before."

These two interpretations seem to epitomize the type of reading that results from stereotyped meanings applied to literature, in this case apparently based on minor clues in the selections which strike a memory in the mind of the reader. Although the Browning poem might very well be interpreted as symbolic of death, the rose-brier convention seems to mark clearly the difference between the use of the selection as a point of departure and misreading through application of stereotypes.

The eighth-grade students with little knowledge of animals always find much amusement in the line from Longfellow which describes Evangeline's breath ("sweet as the kine that graze in the meadow,") and one boy incorporates the idea in his imagery of Eugene's awareness of his teacher, "He would see a girl with pretty hair, he would smell her sweet breath (like cow) and taste the sweet air of spring." Here, with its apparent humor, the classification is more difficult. Drawing on his literary experience, the student includes elements of conventionality and conformity along

with the divergent thinking which causes him to see the fun of the comparison.

Rigidity

Various studies of creativity have indicated that the creative individual is freer from rigidity than the less creative individual is. Protocols dealing with the characters of this study have indicated that the students have usually been sympathetic with Eugene, have placed the reasons for Mr. Morehouse's anger on some factor which has explained his somewhat irascible behavior, and have seen the hidden love of the father in "The Secret Heart." One extremely rigid student, however, could see nothing good in the character of Eugene, saying of him,

I think that Eugene is a lazy, stupid, snag-toothed, inconsiderate, weak, conceited, no good, ugly boy. It is plain that this boy is no good. He thinks he is strong, etc., but then he doesn't even try.

Chief elements of creativity in this response seem to be those of freedom of expression and departure from the norm in expression. Contrasting with these elements are those of literal interpretation, perception of rather strong black-and-white or right-and-wrong elements, and greater dogmatism than is usually found in a creative student's approach to character analysis.

Interpretation

Through a close look at student writing, the analyses in Chapter IV have established that by means of imagistic questions it is possible to separate a kind of thought process which can differentiate between factors usually labeled "creative" and those usually measured by intelligence and achievement tests. These analyses suggest that certain types of questions which measure imagery and the affective nature of imagery can be used to develop an instrument to determine potential for creativity in language. A summary of certain relationships which have been discussed with individual protocols in this chapter emphasizes the possibilities.

First examined here were the responses to questions concerning several types of meaning of the selections. Inferential meaning, symbolism, and literal meaning have been among the subjects of this part of the study. These answers have also indicated the students' creative approaches through such matters as independence of judgment, divergent thinking, interest in complexity, humor, and freedom from stereotypes. Some of these types of analysis have indicated associations with achievement and intelligence measures, perhaps, as has been pointed out, because of the language relationship of fluency.

The second part of the analysis has dealt with imagery. Generally, those questions dealing directly with

image analysis have not shown a significant association with the variables of intelligence and achievement test scores. On the short form of the instrument the same associations between the literal-meaning questions and the test variables apply, with fewer significant associations between answers to questions measuring imagery and the intelligence and achievement instruments.

Other parts of the chapter, those dealing with symbolism and with the presence in the protocols of characteristics of creative subjects, have indicated ways in which the creative individual may employ the images he perceives to reach certain ideational development different from the conclusions reached by the less creative individual.

One segment of the analysis pointing directly to possibilities in the construction of an instrument is the comparison of the two forms of questions. The associations between long and short forms are significant for twenty of the thirty-nine pairs on which analyses were run. About half of these short-form answers are associated also with at least one of the achievement or intelligence measures, generally those dealing with literal or figurative meaning. On nine pairs of questions which show a significant association between forms, the short-form answers are not associated significantly with any achievement section or with the CTMM. The subjects of these questions have been identified in the tables as: total sensory, kinesthetic and literal, sound, diction, intuitive thinking, visual imagery and

connotative meaning, symbolic and literal meaning, connotative meaning and mood, affective color imagery, and total sensory. Two sets of questions are associated with two test variables; these subjects are visual imagery for one and touch and kinesthetic imagery for the other. One set of questions with forms which are associated is based on character analysis and imagination; it is associated with the word meaning section of the SAT only.

These twelve questions, then, seem to point particularly to the kinds of questions that can differentiate between the factors labeled as creative and those usually measured by intelligence and achievement instruments. They are based on images of all kinds and the affective nature of those images; some of them are symbolic in meaning, others are connotative.

Using the information gained from these associations, it should be possible to construct test items that would be discriminating in selection of students exhibiting in high degree the kind of imagistic thinking which seems to point to linguistic or literary creativity.

An important question to consider in attempting to outline the requirements for such items might be the following: What kinds of questions do the creative students answer differently?

The most discriminating questions are those which require the student to make a decision on the basis of the

images he perceives. Generally, tally types of questions are answered at least as well by the high intelligence group as they are by the high creative group. The tendency of the high intelligence student to conform by supplying the answer indicating the greatest number of images is a likely reason for the failure of the tally-type questions to discriminate.

High creative subjects choose the more "poetic" statement of the theme, rather than the factual statement, even though the more pleasing answer esthetically may not be as accurate in presenting literal meaning. If the two statements are equally factual and equally pleasing esthetically, the high creative subjects are as able to select answers that give the meaning of a selection as are the high intelligence students.

Questions that distinguish between the excitement reflected in images and a quiet storyless type of poetic statement elicit answers from creative students different from answers given by high intelligence students, with the creative subjects selecting responses which suggest violence and excitement. Differences are also evident between answers given by high creative groups and those by high intelligence subjects on questions that require the interpretation of symbolic meaning.

Questions that require openness and sympathy rather than determination of black-and-white or right-and-wrong draw different responses from creative subjects. Although

each question in this study seems to elicit sympathy of a majority of the subjects, indications are that items especially worded to measure the difference in the creative student's openness versus the intelligent student's perception of right-and-wrong could detect differences in this respect.

If finer discriminations are desired, gradations between answers need to be drawn with this direct aim. Some of these response items seem, on analysis of results, to present more nearly the type of choices aimed for in a teaching instrument, in which the objective is not to differentiate between students but to lead into understanding of the material. The clarity of choice between items must be maintained, however, in the interpretation of symbols, the affective nature of images, and the sympathetic response to character.

The other question which seems to be basic to the development of items for a test of creativity might be phrased in these terms: What type of literary selection should be the basis of the questions?

The creative subject seems much more impatient with material of any kind that he considers lacking in challenge, as the discussion of some of the protocols has shown. He is willing to struggle with interpretation of difficult material, and, as the analyses have shown, he does as well on the interpretation of difficult material as does the high intelligence subject. But there should be something to indicate a

need for resolution--a symbol, a suggestion of connotative meaning, even a hint of unexplained story--to attract his attention and cause him to seek his own ordering principle, or by his intuitive leap to bring to himself understanding of the ordering principle that is the poem. If the challenge is not there, he may react to the apparently simple as the poor reader reacts to the apparently difficult, by failing to devote enough attention to find the solution.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

On the basis of the material presented in the preceding chapters, the following questions and related sub-questions are summarized:

1. Are creative factors evident in the open-end questions in sufficient number that they can be used to establish the presence of creative abilities?
2. Is it possible to measure aspects of creativity through analysis of imagistic response?
3. Are there statistically significant relationships between the two forms of the questions?
4. What is the effect on the subject and his responses to the objective questions of having written the answers to the open-end questions?
5. Are there statistically significant differences between the objective answers of those subjects identified on the basis of written answers as creative and answers by the total population? Are differences between the high creative, high creative-high intelligence, and high intelligence groups significant

within the selected groups and between each group and the total population?

6. What are the implications of this study for the construction of an instrument to predict the creativity potential of students in the type of literary analysis requiring originality of thought and expression?

Evidence of Creative Factors in Responses

Characteristics of Creative Individuals

Discussion of protocols has pointed to examples of the abilities of creative students to synthesize, in an intuitive kind of leap, to join factors, before disparate, in a meaningful and artistic kind of connectedness. These discussions have attempted to isolate answers that use the stimulus as a point of departure for original thought from answers that appear to be mere misreadings. Thinking of the type sometimes called divergent is exemplified in protocols illustrating openness, freedom from stereotype and convention, reaction to poetic diction and literary convention, and the students' own handling of humor and symbolic and figurative meaning as well as reactions to these elements in the literary selections. These elements are present in enough of the answers to each question to provide adequate delineation between levels. Most students in the group wrote at least some answers that were categorized as "creative."

Conversely, only two students had all answers that qualified as Categories I and II, levels indicating originality.

Creativity and Imagistic Response

In addition to the established criteria for identification of creative people, this investigation has examined the responses of the subjects to imagery and symbolism in the literary selections. Discussions of imagery showed the students' reactions to visual images, sound images, tactile and kinesthetic images, and taste and olfactory images. Comparison of these responses to the students' scores on reading achievement and mental maturity suggests that in a number of these areas the lack of significant association indicates that factors other than, or in addition to, those of reading skills and intelligence are operating.

On the other hand, questions about word meaning, literal and connotative meaning, and some questions about figurative meaning showed statistically significant associations with the standardized test scores, indicating that, as the framework for the study postulated, these elements, even in presentations dependent as little as possible on actual reading, are nevertheless linguistically related.

Associations between Questions

Chi-square analysis was used to find the significance of associations between categories assigned to the

written answers on the open-end form of the questions and the answers selected by the students on the short form. Of the thirty-nine sets of questions thus matched, twenty showed association between the .05 and .001 levels of significance. The short-form answers of half of that number were not significantly related to the achievement and mental maturity variables; the other half of the answers were associated with one or more of the factors on the three forms of the achievement battery or the intelligence instrument. The nature of the short-form questions that show associations with the long-form equivalents is evident by a consideration of the questions themselves. (See also Table C.1, Appendix C, "Chi-square analysis of significance of associations between answers and scores on each of the three sections of the SAT and the CTMM," and Table C.2, Appendix C, "Chi-square analysis of associations between categories assigned long-form answers and answers selected on short-form questions.") The subject matter of these questions is classified as "total sensory," "character analysis," "literal meaning and kinesthetic imagery," "sound imagery, diction, and intuitive thinking," "visual imagery and connotative thinking," "symbolic and literal meaning," "connotative meaning and mood," "sight, color, affective-color," and "total sensory." These designations indicate that where the imagery is uppermost in importance it is possible to find between forms of

the question significant associations that remain isolated from factors of language and intelligence.

Effect of Long-form Study on
Short-form Answers

The preliminary study of the two year groups of the test population having indicated that the two classes were not significantly different statistically on the basis of sex, mental maturity, or achievement test scores, the second-year students were given a split halves version of the open-end questions in order to study the effect taking the test might have on responses to the multiple choice questions. In spite of the lack of significant differences on the variables used to establish equivalency, there are differences between groups on some responses, as shown in Table C.4, Appendix C, "Chi-square analysis of questions showing significant differences between responses of year groups on essay and multiple-choice answers." Five odd-numbered short-form answers show differences significant between the .05 and the .001 levels, although both groups had the two forms. In addition there are four long-form answers in which the number assigned to one or more categories differs significantly between groups. In the even-numbered questions, the long form of which was given to the first-year group but not to the second, nine short-form answers show a difference which could not be attributed to chance at the .05 level or beyond. One of these (X, 1) does not indicate a "better" answer for

either group, but the second year responses are more scattered. On another (X, 4) the second year group is more discriminating on mood, in spite of having less exposure to the instrument. Three (II, 1, II, 2, and IV, 2) indicate that those who had the long form perceive more images than those who did not. Three others, (VI, 2, VI, 4, and VI, 6) indicate better understanding of word meaning (all based on the same poem) among those who took the full number of long-form questions. The remaining difference (VI, 7) is found on a negatively stated question, on which the first year group did significantly better at deciding the meaning. Greatest implication for the outcome of this study is the fact that a longer period of study seemed to produce more clearcut image perception on three questions; however, on other imagery questions the factor did not seem to operate significantly.

Implications

This investigation indicates that through the use of equivalent forms of questions it is possible to select multiple-choice questions using imagistic analysis to identify factors related to creativity. It establishes that image perception can be employed, in conjunction with other characteristics of creative people, to identify factors of originality among responses of eighth-grade students to literary stimuli. It further shows that, in many cases, the answers given by

creative students thus identified are significantly different from the answers of the total population although answers of high intelligence groups alone do not establish a statistically significant difference.

These insights suggest the construction of an instrument of predictive value. The construction of new or revised test items would be the first step. Items discriminating between creative and intelligence groups could be the bases for revisions of questions and response items. Question II, 4, for example, does not discriminate between images thought appropriate by the creative and intelligence groups. Long-form responses, on the other hand, have shown that some creative students reject taste imagery as inappropriate. The response items might be reworded to give the student opportunity for greater discrimination, retaining the two items (a and d) which attract the greatest response but revising the other two so that the question and possible answers might read:

- II, 4. To complete the ideas expressed, the poet's thoughts might have included another verse about which of these experiences?
 - a. The remembered touch of soft velvet and the taste of ripe fruit.
 - b. The cold feel of snow hitting his face and the taste of something bitter yet sweet to his tongue.
 - c. The joyous feeling of overcoming death.
 - d. The memory of a happy time.

The tally-type question and response of III, 1, is negatively associated, on a percentage basis, with the creative measure. In its place is substituted a question to

measure the affective nature of the image and the student's perception of the reality and the dream. In this revision, account is also taken of the desirability of allowing for finer discrimination between items. The choice between correct, factual, answers and a more affective, and hence creative, answer is matched with one "incorrect" answer also based on the affective nature of the imagery. This revision would read:

- III, 1. Eugene's imagination is very vivid with the things that appeal to his senses. What does the use of the imaginative scene tell about Eugene?
- a. It makes the reader able to understand the way Eugene felt about his real world.
 - b. Since it was just an imaginary scene, it really doesn't give any idea about how the real Eugene saw or smelled or felt about real things.
 - c. The real Eugene was probably not very different from the way he imagined himself.
 - d. The pleasant smells and sights contrast with the unpleasant buzz of flies and smell of chalk in the same way Eugene contrasts himself with the other children.

Question III, 5, is equally discriminating in selecting the highly intelligent and the highly creative student from the total group. An added statement, incorporating some of the things the more original writers say about the nature of the poet, might be able to discriminate between those in the selected groups. The revised responses read:

- III, 5. Which of these experiences did the author probably use in writing this passage?
- a. His own imagination.
 - b. Remembering the way he dreamed as a boy.

- c. Someone he knew was Eugene. A writer would be able to describe the way he saw and smelled and felt.
- d. After seeing a boy like Eugene. A writer would put together everything he saw or smelled and the way he felt.

These revisions, which have not been administered to a test population, are offered to show ways in which the information gained from the two administrations of the questions might be employed in shaping an instrument of predictive value. The questions in their original form are not offered as such a measure, although analyses of the responses have shown that individually some of the questions do discriminate between students who are in the creative group and those in the high intelligence group or in the total population.

Considering the lack of guidelines to follow in development of questions for this study and the exploratory nature of the application of imagistic factors to the study of original thought, the relevance of the two types of questions appears to offer a significant basis for the development of other questions which can apply these findings directly. Although the essay form of the questions has been useful in establishing levels of expectation as well as in offering insight into thought processes, the essay answers might be further used as the source for response items. Here care should be exercised, however, to assure that the mere presence of an idea in an answer does not suggest its use to a student who might not otherwise have considered it as a possibility.

The design and outcomes of this study suggest the possibility of using similar approaches to study other problems. The classroom's value as a center of systematic study of the learning process has been demonstrated repeatedly. Through the use of equivalent test forms it may be possible to study objectively reactions and processes heretofore left largely to introspective and subjective methods. The application of the method suggests the construction of objective-type tests which depend on decision-making rather than the question-recall type of information questions sometimes associated with the older type of objective instrument.

Not only does the study suggest further investigation in the application of the objective forms however; the method of presentation by tape recorder and simultaneous printed form seems to offer a basic pattern that might be applied for individual study of literary selections of many kinds. In the evaluation of the use of the recorder, more than eighty-five per cent of the students indicated belief that the method contributed to greater understanding of the selections, and more than half of the students said that they had listened to at least one of the selections more than once. One third of the students felt that they understood better those questions on which they wrote the long-form answers; almost forty-five per cent said the method of answering the question did not make any difference; twenty-five

per cent felt that they understood better the selections on which they prepared the short-form answers only.

Conclusion

The recognition and development of creative talent has long been the concern of the teacher of English; fostering originality in thought and composition is therefore not new to those teachers who look for ways to develop the individual to the fullest extent. It is the purpose of this study to point some directions by which others may develop and refine, perhaps in other classrooms, instruments that will give predictive validity to the search for creativity potential. By the use of techniques to study image conceptualization, this study has established that it is possible to select students with a special "creative" type of thought pattern that is not the same as language ability or intelligence. Such analysis should make possible the study of image-related thought of that segment of the student population whose imaginative powers show promise of original contributions but whose special abilities do not necessarily show up on achievement and intelligence instruments or in grades on school courses. Through this approach, an additional tool not found in existing instruments becomes available.

BIBLIOGRAPHY

Books

- Anderson, Harold H. Creativity and its Cultivation. New York: Harper and Brothers, 1959.
- Association for Supervision and Curriculum Development. Perceiving, Behaving, Becoming: A New Focus for Education. 1962 Yearbook. Washington: ASCD, 1962.
- Berelson, Bernard, and Steiner, Gary A. Human Behavior: An Inventory of Scientific Findings. New York: Harcourt, Brace, and World, 1964.
- Brooks, Cleanth, The Well Wrought Urn. New York: Harcourt, Brace, and World, 1947.
- Bruner, Jerome S. On Knowing: Essays for the Left Hand. Cambridge: Belknap Press of Harvard University, 1962.
- _____, and Gordon, William J. J. Conference on Motivating the Creative Process, Proceedings. Harriman, New York: published by the conference, 1957.
- _____, Goodnow, Jacqueline J., and Austin, George A. A Study of Thinking. New York: John Wiley and Sons, 1956.
- Coffin, Robert P. Tristram. The Substance That Is Poetry. New York: Macmillan, 1942.
- Flanagan, John C., et al. Project Talent, The American High School Student. Pittsburgh: University of Pittsburgh, 1964.
- Gallagher, James J. Teaching the Gifted Child. Boston: Allyn and Bacon, 1964.
- Getzels, Jacob W., and Jackson, Philip W. Creativity and Intelligence. New York: John Wiley and Sons, 1962.

- Ghiselin, Brewster. The Creative Process, A Symposium. New York: Mentor Books, 1955.
- Goldner, Bernard B. The Strategy of Creative Thinking. Englewood Cliffs, N. J.: Prentice Hall, 1962.
- Gordon, William J. J. Synectics, The Development of Creative Capacity. New York: Harper and Brothers, 1961.
- Gove, Philip Babcock, editor. Webster's Third New International Dictionary. Springfield, Massachusetts: G. and C. Merriam Company, 1961.
- Guilford, J. P. Personality. New York: McGraw-Hill, 1959.
- _____, et al. A Factor-Analytic Study of Creative Thinking. I. Hypotheses and Descriptions of Tests. Los Angeles: University of Southern California, 1951.
- Hartley, Helene. Tests of Interpretative Reading of Poetry. New York: Teachers College, Columbia University, Contributions to Education, 1930.
- Hayek, F. A. The Sensory Order. Chicago: University of Chicago, 1952.
- Hodgman, Charles, editor. Standard Mathematical Tables. Cleveland, Ohio: Chemical Rubber Publishing Company, 1954.
- Hollingworth, Leta S. The Psychology of the Adolescent. New York: D. Appleton and Company, 1928.
- Mearns, Hughes. Creative Power. New York: Dover, 1958.
- _____. Creative Youth. Garden City, N. Y.: Doubleday, Page, and Company, 1962.
- Millett, Fred B. Reading Poetry. New York: Harper and Brothers, 1950.
- Nelson, Henry B., editor. Education for the Gifted. Yearbook LVII, National Society for the Study of Education. Chicago: University of Chicago Press, 1958.
- Parner, Sidney J., and Harding, Harold F., editors. A Source Book for Creating Thinking. New York: Charles Scribner's Sons, 1962.
- Patrick, Catharine. What Is Creative Thinking? New York: Philosophical Library, 1955.

- Richards, I. A. Practical Criticism. New York: Harcourt, Brace, and Company, 1929.
- Richards, I. A. Principles of Literary Criticism. New York: Harcourt, Brace, and World, 1925.
- Rugg, Harold. Imagination. New York: Harper and Row, 1963.
- Schertzer, Bruce. Working with Superior Students: Theories and Practices. Chicago: Science Research Associates, 1960.
- Smith, Paul, editor. Creativity. New York: Hastings House, 1959.
- Spurgeon, Caroline. Shakespeare's Imagery. New York: Macmillan, 1935.
- Stallman, R. W., and Watters, R. E. The Creative Reader. New York: Ronald Press, 1954.
- Strang, Ruth, McCullough, Constance M., and Traxler, Arthur E. Problems in the Improvement of Reading. New York: McGraw-Hill, 1955.
- Taylor, Calvin W., and Barron, Frank. Scientific Creativity: Its Recognition and Development. New York: John Wiley and Sons, 1963.
- Titchener, Edward Bradford. Experimental Psychology of the Thought Processes. New York: Macmillan, 1909.
- Torrance, E. Paul. Role of Evaluation in Creative Thinking. Minneapolis: Bureau of Educational Research, University of Minnesota, 1964.
- Wellek, Rene, and Warren, Austin. Theory of Literature. New York: Harcourt, Brace, 1956.
- Wimsatt, William K., and Brooks, Cleanth. Literary Criticism. New York: Alfred A. Knopf, 1962.
- Witty, Paul, editor. The Gifted Child. Boston: D. C. Heath, 1951.

Articles and Pamphlets

- Barron, Frank. "Creativity: What Research Says About It," National Education Association Journal, Vol. 50, No. 3 (March, 1961), pp. 17-19.
- Braddock, Richard, Lloyd-Jones, Richard, and Schoer, Lowell. Research in Written Composition. Champaign, Illinois: National Council of Teachers of English, 1963.
- Committee on English Programs for High School Students of Superior Ability, NCTE. English for the Academically Talented Student in the Secondary School. Washington: National Education Association, 1960.
- Dell, William C. "Creativity and the English Curriculum," The English Journal, LII, 3 (May, 1963), p. 200.
- Drews, Elizabeth Monroe. "Profile of Creativity," National Education Association Journal, LII, 1 (January, 1963), pp. 26-28.
- Kreuter, Kent, and Kreuter, Gretchen. "The Useful Genius," Saturday Review, XLVII, 42 (October 17, 1964), p. 66.
- MacKinnon, Donald W. "What Makes a Person Creative?" Saturday Review, XLV (February 10, 1962), p. 45 ff.
- Rogers, C. R. "Toward a Theory of Creativity," ETC, A Review of General Semantics, 11: 249-60, 1954.
- Rubin, Louis J. "Creativity and the Curriculum," Phi Delta Kappan, XLII (June, 1963), pp. 438-440.
- Shane, Harold G., and Mulry, June Grant. Improving Language Arts Instruction Through Research. Washington: Association for Supervision and Curriculum Development, 1963.
- Squire, James R. The Responses of Adolescents While Reading Four Short Stories. Champaign, Illinois: National Council of Teachers of English, 1964.
- Taylor, Calvin W. "Effects of Instructional Media on Creativity," Educational Leadership, XIX (April, 1962), pp. 453-458.
- Valentine, C. W. "The Function of Images in the Appreciation of Poetry," British Journal of Psychology, XIV (October, 1923), pp. 164-191.

Unpublished Material

Baughman, M. Dale, editor. Challenging Talented Junior High School Youth. Urbana, Illinois: The Junior High School Association of Illinois, 1959. (Mimeographed.)

Committee on Creativity, Michigan Cooperative Curriculum Program. Bibliography on Creativity. Lansing: Department of Public Instruction, 1964. (Multilithed.)

Taylor, Vi Marie, Imagery in the Poetry of Robert Browning. Unpublished Master's thesis, English Department, Texas Woman's University, 1951.

Torrance, E. Paul, and Cunnington, B. F. Sounds and Images. Minneapolis: Bureau of Educational Research, University of Minnesota, 1962. (Mimeographed.)

APPENDICES

APPENDIX A

TITLES OF LITERARY SELECTIONS

- I. Vachel Lindsay, "An Indian Summer Day on the Prairie"
- II. Percy Bysshe Shelley, "To _____"
- III. Thomas Wolfe, Look Homeward, Angel, excerpt
- IV. Robert P. Tristram Coffin, "The Secret Heart"
- V. Ralph Waldo Emerson, "Rhodora"
- VI. Anon., "Anticipations"
- VII. Hamlin Garland, "The Mountains Are a Lonely Folk"
- VIII. John Keats, "When I Have Fears That I May Cease To Be"
- IX. Robert Browning, "Meeting at Night"
- X. Ellis Parker Butler, "Pigs Is Pigs"

APPENDIX B

LITERARY SELECTIONS AND QUESTIONS

PART I

Free-Response Questions

- I. Have you ever noticed how different things appear at different times of the day or year?

In the Beginning
The sun is a huntress young,
The sun is red, red joy,
The sun is an Indian girl,
Of the tribe of the Illinois.

Mid-morning
The sun is a smoldering fire,
That creeps through the high gray plain,
And leaves not a bush of cloud
To blossom with flowers of rain.

Noon
The sun is a wounded deer,
That treads pale grass in the skies,
Shaking his golden horns,
Flashing his baleful eyes.

Sunset
The sun is an eagle old;
There in the windless west,
Atop of the spirit-cliffs
He builds him a crimson nest.

- I. 1. What kind of person do you imagine would see things in the way this poem describes them?
2. What title would you give the poem?
3. What does this poem make you see?

- II. What happens when things die? Poets wonder, too, and sometimes try to answer the question.

Music, when soft voices die,
Vibrates in the memory;
Odors, when sweet violets sicken,
Live within the sense they quicken.

Rose leaves, when the rose is dead,
Are heaped for the beloved's bed;
And so thy thoughts, when thou art gone,
Love itself shall slumber on.

- II. 1. What does the poem make you see and hear, feel, smell, or taste?
2. The poet has appealed to some of your senses. If the poet were to add another verse, what kind of senses do you think he should appeal to, to make the poem complete?
3. What do you think the poem is about?
- III. Eugene is an elementary school boy who imagines he has a crush on his teacher.

He saw himself a strong, heroic, brilliant boy, the one spot of incandescence in a back-woods school attended by snag-toothed children and hair-faced louts . . .

He would pretend to be stumped by the exercise; she would come eagerly and sit beside him, leaning over so that a few fine strands of carrot-colored hair brushed his nostrils . . .

She would explain things to him at great length, guiding his fingers with her own warm, slightly moist hand, when he pretended not to find the place; and she would chide him gently, saying softly:

"Why are you such a bad boy?" . . .

Later, as the golden sun was waning redly, and there was nothing in the room but the smell of chalk and the heavy buzz of old October flies, they would prepare to depart . . .

And they would walk in the setting sun, skirting the pine-fresh woods, passing along the path red with maple leaves, past great ripening pumpkins in the fields, and under the golden autumnal odor of persimmons.

III. (Con't.)

1. Eugene's imagination is very vivid with the things that appeal to his senses. Which senses does he use in his imagination? What does he describe in each one?
 2. From what the author says about Eugene, what kind of boy do you think he is?
 3. Imagine Eugene in another situation (at another time, or place, or season). What are the things he would see, smell, taste, feel, and hear?
- IV. This poem tells you a great deal about a father. See if you can imagine the picture as the boy saw it.

Across the years he could recall
His father one way best of all.

In the stillest hour of night
The boy awakened to a light.

Half in dreams he saw his sire
With his great hands full of fire.

The man had struck a match to see
If his son slept peacefully.

He had held his palms each side the spark
His love had kindled in the dark.

His two hands were curved apart
In the semblance of a heart.

He wore, it seemed to his small son
A bare heart on his hidden one,

A heart that gave out such a glow
No son awake could bear to know,

It showed a look upon a face
Too tender for the day to trace.

One instant, it lit all about,
And then the secret heart went out.

But it shone long enough for one
To know that hands held up the sun.

IV. (Con't.)

1. Tell the story of this incident in your own words. What do you see, hear, and feel in the story?
2. How many different words can you find that suggest the idea of light or darkness? List them.
3. This poem mentions the word "heart" four times. What does the word refer to as it is used in the poem?
4. Why did this scene impress the boy?

V. We receive "pictures" with our other senses as well as with our eyes. Note the ways this poet helps you sense something.

In May, when sea-winds pierced our solitudes,
 I found the fresh Rhodora in the woods,
 Spreading its leafless blooms in a damp nook,
 To please the desert and the sluggish brook.
 The purple petals, fallen in the pool,
 Made the black water with their beauty gay;
 Here might the red-bird come his plumes to
 cool,
 And court the flower that cheapens his array.
 Rhodora! if the sages ask thee why
 This charm is wasted on the earth and sky,
 Tell them, dear, that if eyes were made for
 seeing,
 Then Beauty is its own excuse for being:
 Why thou wert there, O rival of the rose!
 I never thought to ask, I never knew:
 But, in my simple ignorance suppose
 The self-same Power that brought me there
 brought you.

- V. 1. Several of the words in this poem appeal to our sense of touch or feeling. Which ones most directly make the appeal? List them.
2. What question do you think the poet seems to be trying to answer in this poem?

VI.

I love preliminary things:
 The tuning up of flutes and strings;
 The little scales musicians play
 In varying keys to feel their way;
 The hum--the hush in which it dies
 But most to see the curtain rise.

VI. (Con't.)

I love preliminary things:
 The little box the postman brings;
 To cut the twine, to break the seals
 And wonder what the lid reveals;
 To lift the folds in which it lies
 And watch the gift materialize.

The snowdrop and the daffodil,
 The catkins hanging straight and still,
 The blossom on the orchard trees--
 Do you know greater joys than these?
 Each represents the hope that springs
 In all preliminary things.

- VI. 1. In order to understand the poem, the reader would need to know the meaning of preliminary. What do you think the word means here?
2. From what the author says about what he likes, name three other things you think he would particularly like. Why?
3. What would be the most appropriate title for this poem?

- VII. Sometimes we compare people to things (cute as a speckled pup; gay as a flower). Here we think of mountains as if they were people.

The mountains they are silent folk,
 They stand afar--alone;
 And the clouds that kiss their brows at
 night
 Hear neither sigh nor groan.
 Each bears him in his ordered place
 As soldiers do, and bold and high
 They fold their forests round their feet
 And bolster up the sky.

- VII. 1. Why does the poet use the double subject (mountains they) in the first line?
2. Why do you think the poet compares mountains and people?
3. In what way are they alike? How are they different?

- VIII. What are the most important things in life? What do you think is important to this poet?

When I have fears that I may cease to be
 Before my pen has gleaned my teeming
 brain;
 Before high-piled books, in charactery,
 Hold like rich garnerers the full ripened
 grain,
 When I behold, upon the night's starred face,
 Huge cloudy symbols of a high romance,--
 And think that I may never live to trace
 Their shadows, with the magic hand of
 chance;
 And when I feel, fair creature of an hour,
 That I shall never look upon thee more,
 Never have relish in the faery power
 Of unreflecting love;--then on the shore
 Of the wide world I stand alone, and think
 Till love and fame to nothingness do sink.

- VIII. 1. What is it that the poet fears?
2. The poet compares writing with another every-day activity. What is it with which writing compares?
3. When the poet speaks of standing alone on the shore, what does he probably mean?

- IX. The man described in this poem is excited, but he is quite aware of the things around him. How many ways can you find in which the poet notes his surroundings?

The gray sea and the long black land;
 And the yellow half-moon large and low;
 And the startled little waves that leap
 In fiery ringlets from their sleep,
 As I gain the cove with pushing prow,
 And quench its speed in the slushy sand.

Then a mile of warm sea-scented beach;
 Three fields to cross till a farm appears;
 A tap at the pane, the quick sharp scratch
 And blue spurt of a lighted match,
 And a voice less loud, through its joys and
 fears,
 Than the two hearts beating each to each!

- IX. 1. In this very short poem, the poet leaves a great deal to our imaginations. What had happened before? Why was the narrator coming to the beach? What happened then?

IX. (Con't.)

2. What colors are mentioned in the poem and what effect do they give you?
3. What sounds do you hear as you listen and read the poem?
4. What are some of the ways in which the man's senses make him aware of what is around him on the beach? What does he see? Hear? Smell? Taste? Feel?
5. What would be an appropriate title for a companion to this poem?

- X. In this part of a story you are given a picture of the way a man came into his house. Try to decide why he acted as he did, and why his wife acted as she did.

Mr. Morehouse stormed into the house. "Where's the ink?" he shouted at his wife as soon as his foot was across the doorsill.

Mrs. Morehouse jumped guiltily. She never used ink. She had not seen the ink, nor moved the ink, nor thought of the ink, but her husband's tone convicted her of guilt of having borne and reared a boy, and she knew that whenever her husband wanted anything in a loud voice, the boy had been at it.

"I'll find Sammy," she said meekly.

When the ink was found, Mr. Morehouse wrote rapidly, and he read the completed letter and smiled a triumphant smile. "That will settle that crazy Irishman!" he exclaimed. "When they get that letter he will hunt another job, all right."

- X. 1. Why did Mr. Morehouse storm at his wife? Tell the story as it might have happened before he comes into the house.
2. What kind of man was Mr. Morehouse?
 3. Mrs. Morehouse jumped guiltily. Why?
 4. From the way this part of the story is written, what kind of story do you think this is a part of?

PART II

Multiple Choice Questions

- I. Have you ever noticed how different things appear at different times of the day or year?

In the Beginning
 The sun is a huntress young,
 The sun is red, red joy,
 The sun is an Indian girl,
 Of the tribe of the Illinois.

Mid-morning
 The sun is a smoldering fire,
 That creeps through the high gray plain,
 And leaves not a bush of cloud
 To blossom with flowers of rain.

Noon
 The sun is a wounded deer,
 That treads pale grass in the skies,
 Shaking his golden horns,
 Flashing his baleful eyes.

Sunset
 The sun is an eagle old;
 There in the windless west,
 Atop of the spirit-cliffs
 He builds him a crimson nest.

- I. 1. The mention of "huntress," "deer," and "eagle" help you to visualize the sun as it might be seen by which of these?
- A hunter.
 - A farmer.
 - A city child.
 - An Indian.
2. Of these four, which would be the most appropriate title for this selection?
- "Winter Sun in the Mountains"
 - "An Indian Summer Day on the Prairie"
 - "A Day in Indian Country"
 - "An Indian Maiden"
3. Which of these reasons best explains why the noon sun is described as "wounded"?
- At noon the sun seems to be traveling more slowly and looks smaller than it does near the horizon.

I. (Con't.)

- b. It would be hidden by clouds.
- c. The sky would be the color of grass.
- d. It is winter and the sun is not very strong.

4. Which of these statements about the picture in the last part of the poem seems most appropriate?
- a. It does not match the second part, which mentions plains.
 - b. It helps visualize a wide plain with the western side ending at a cliff.
 - c. It shows that the scene described is of a valley in the mountains.
 - d. It is not very effective because who ever saw a red nest?

II. What happens when things die? Poets wonder, too, and sometimes try to answer the question.

Music, when soft voices die,
Vibrates in the memory;
Odors, when sweet violets sicken,
Live within the sense they quicken.

Rose leaves, when the rose is dead,
Are heaped for the beloved's bed;
And so thy thoughts, when thou art gone,
Love itself shall slumber on.

- II. 1. The poet gives the ideas of this poem in terms of how many senses?
- a. The five senses (sight, sound, odor, taste, feeling).
 - b. Three of the five senses.
 - c. Love, feeling, thought.
 - d. One sense, sound.
2. The poet lists three remembered experiences. In what order does the poet use them?
- a. A sight, a sound, an odor.
 - b. An odor, a sound, a sight.
 - c. A sound, an odor, a sight.
 - d. None of these very clearly.
3. Which of the following lines seem most nearly to express the same idea as this poem?
- a. All that we wish to stay
Tempts and then flies.
 - b. Beauty will live on in some form;
You will live in my thoughts of you.

II. (Con't.)

- c. When I arose and saw the dawn
I sighed for thee.
 - d. The woodland violets reappear;
All things revive in field or grove.
4. To complete the ideas expressed, the poet's thoughts might have included another verse about which of these experiences?
- a. The remembered touch of soft velvet and the taste of ripe fruit.
 - b. Fear of death on a high mountain.
 - c. The sight of a bare tree trunk in winter.
 - d. The memory of a happy time.

III. Eugene is an elementary school boy who imagines he has a crush on his teacher.

He saw himself a strong, heroic, brilliant boy, the one spot of incandescence in a back-woods school attended by snag-toothed children and hair-faced louts . . .

He would pretend to be stumped by the exercise; she would come eagerly and sit beside him, leaning over so that a few fine strands of carrot-colored hair brushed his nostrils . . .

She would explain things to him at great length, guiding his fingers with her own warm, slightly moist hand, when he pretended not to find the place; and she would chide him gently, saying softly:

"Why are you such a bad boy?" . . .

Later, as the golden sun was waning redly, and there was nothing in the room but the smell of chalk and the heavy buzz of old October flies, they would prepare to depart . . .

And they would walk in the setting sun, skirting the pine-fresh woods, passing along the path red with maple leaves, past great ripening pumpkins in the fields, and under the golden autumnal odor of persimmons.

- III. 1. Eugene's imagination is very vivid with the things that appeal to his senses. With how many senses does he imagine the things around him in this passage?
- a. Five (Sight, sound, taste, odor, touch).
 - b. Four
 - c. Two
 - d. Three

III. (Con't.)

2. Eugene seemed to imagine some things with more than one sense (seeing and hearing something, for instance). Which of the following did he observe in this way?
 - a. Maple leaves.
 - b. The sun.
 - c. The persimmons.
 - d. Children.
3. Some of the sight images are repeated, such as the colors gold and red. Which of these reasons is the best for this repetition?
 - a. They show that Eugene's imagination was running out of adjectives.
 - b. It happened to be late afternoon in autumn and things looked red.
 - c. Eugene was living in a bright dream, in which everything was brighter colored, more vivid, and more beautiful than in real life.
 - d. Red and yellow may be favorite colors of the author.
4. From this passage you can get some idea about the real Eugene. Which of these statements describes him best?
 - a. He was a little boy who was probably always in trouble and being scolded by the teacher.
 - b. He was always showing off before the girls.
 - c. He was a quiet boy who didn't like school and made up a school he did like.
 - d. He was an imaginative boy who read a lot and thought of himself as the heroes he read about.
5. Which of these experiences did the author probably use in writing this passage?
 - a. His own imagination.
 - b. Remembering the way he dreamed as a boy.
 - c. Someone he knew was Eugene.
 - d. After seeing a boy like Eugene.

IV. This poem tells you a great deal about a father. See if you can imagine the picture as the boy saw it.

Across the years he could recall
His father one way best of all.

IV. (Con't.)

In the stillest hour of night
The boy awakened to a light.

Half in dreams he saw his sire
With his great hands full of fire.

The man had struck a match to see
If his son slept peacefully.

He had held his palms each side the spark
His love had kindled in the dark.

His two hands were curved apart
In the semblance of a heart.

He wore, it seemed to his small son
A bare heart on his hidden one,

A heart that gave out such a glow
No son awake could bear to know.

It showed a look upon a face
Too tender for the day to trace.

One instant, it lit all about,
And then the secret heart went out.

But it shone long enough for one
To know that hands held up the sun.

- IV. 1. The boy remembered his father best in what particular way?
 - a. Holding a match between his cupped hands to light a cigarette.
 - b. Holding a match between his cupped hands to look at his sleeping son.
 - c. Holding fire in his hands.
 - d. Holding out his hands in the sunlight.
2. How many different words can you find that suggest the idea of light or darkness? (include the source of light, lamp)
 - a. One to four.
 - b. Five to eight.
 - c. Nine to fifteen.
 - d. More than sixteen.
3. This poem mentions the word "heart" four times. What does the word refer to as it is used in the poem?

IV. (Con't.)

- a. The father's real heart.
 - b. The father's real heart and the heart shape made by his hands, which stands for his love of the boy.
 - c. A paper valentine heart the boy had made for him.
 - d. His face which was heart-shaped in the light of the match.
4. The scene impressed the boy most for which of these reasons?
- a. He saw his father do it many times.
 - b. He will always remember the look of love on the face of his father.
 - c. He was ill and called his father.
 - d. He was frightened when he saw the light in his room.
5. In the scene the boy saw something about his father that he had never known before. What was it that he saw?
- a. How large (great) his father's hands were.
 - b. That his father was very handsome.
 - c. That his father had a bare heart.
 - d. That his father loved him in a way that he did not show when he knew the boy was looking at him.
- V. We receive "pictures" with our other senses as well as with our eyes. Note the ways this poet helps you sense something.

In May, when sea-winds pierced our solitudes,
 I found the fresh Rhodora in the woods,
 Spreading its leafless blooms in a damp nook,
 To please the desert and the sluggish brook.
 The purple petals, fallen in the pool,
 Made the black water with their beauty gay;
 Here might the red-bird come his plumes to
 cool,
 And court the flower that cheapens his array.
 Rhodora! if the sages ask thee why
 This charm is wasted on the earth and sky,
 Tell them, dear, that if eyes were made for
 seeing,
 Then Beauty is its own excuse for being:
 Why thou wert there, O rival of the rose!
 I never thought to ask, I never knew:
 But, in my simple ignorance suppose
 The self-same Power that brought me there
 brought you.

V. (Con't.)

1. Several of the words in this poem appeal to our sense of touch or feeling. Which ones most directly make the appeal?
 - a. woods, purple, beauty, gay.
 - b. sea-winds, fresh, damp, cool.
 - c. petals, pool, ignorance, beauty.
 - d. eyes, rose, plumes, charm.
2. Which of the following meanings of desert must you know to make the meaning complete?
 - a. A barren tract incapable of supporting life without an artificial water supply.
 - b. A forbidding prospect (as bleak, unrelieved changelessness).
 - c. An area of ocean believed to be devoid of marine life.
 - d. A desolate unoccupied plain or coast or pathless woodland.
3. Which one of these sayings about beauty seems to be closest to what this poet says?
 - a. A thing of beauty is a joy forever.
 - b. If you get simple beauty and nought else,
You get about the best thing God invents.
 - c. That beauty exists is enough; it is not necessary that it always be seen and appreciated by someone.
4. Which question do you think the poet seems to be trying to answer in this poem?
 - a. Who planted this flower?
 - b. What worth has beauty if no one sees it?
 - c. Does beauty need anything more?
 - d. Is it better to be beautiful than good?

VI.

I love preliminary things:
 The tuning up of flutes and strings;
 The little scales musicians play
 In varying keys to feel their way;
 The hum--the hush in which it dies
 But most to see the curtain rise.

I love preliminary things:
 The little box the postman brings;
 To cut the twine, to break the seals
 And wonder what the lid reveals;
 To lift the folds in which it lies
 And watch the gift materialize.

VI. (Con't.)

The snowdrop and the daffodil,
 The catkins hanging straight and still,
 The blossom on the orchard trees--
 Do you know greater joys than these?
 Each represents the hope that springs
 In all preliminary things.

- VI. 1. In order to understand the poem, the reader would need to know the meaning of preliminary. Which of these meanings would fit best?
- A contest designed to eliminate the less qualified competitors (as in a sport).
 - A minor match or contest that precedes the main event.
 - Something introductory or preparatory.
 - Something that comes first in importance.
2. Which one of these events would this author enjoy most, according to what he says about what he likes?
- Driving a new car.
 - Playing a game with a gift baseball.
 - Getting ready for Christmas.
 - Writing about his experiences.
3. The author appeals to your senses in the poem. Which of the five senses do you use as you appreciate each stanza?
- Hearing, feeling, sight.
 - Sight, taste, hearing.
 - Sight, smell, taste.
 - Hearing, feeling, sight, a hint of smell.
4. Which of these expresses best the main idea of the poem?
- The thrill of looking forward to something.
 - The pleasure of reminiscing.
 - The pleasure of liking a variety of things.
 - The fun of receiving a surprise.
5. Which of these titles would be most appropriate for the poem?
- "My Favorite Things"
 - "Excitement"
 - "Anticipations"
 - "Receiving a Gift"

VI. (Con't.)

6. If a fourth stanza were added to the poem, which of the following would be most appropriate to the theme?
- a. A walk through the woods in autumn.
 - b. A description of a beautiful flower garden.
 - c. A listing of foods the poet likes.
 - d. The countdown for a rocket launching.
7. Which of these settings is not used by the author?
- a. An orchard in winter.
 - b. A concert hall.
 - c. Outdoors in early spring.
 - d. Inside a home.

VII. Sometimes we compare people to things (cute as a speckled pup; gay as a flower). Here we think of mountains as if they were people.

The mountains they are silent folk,
 They stand afar--alone;
 And the clouds that kiss their brows at night
 Hear neither sigh nor groan.
 Each bears him in his ordered place
 As soldiers do, and bold and high
 They fold their forests round their feet
 And bolster up the sky.

- VII. 1. Why does the poet use the double subject (mountains they) in the first line?
- a. The poet was not very well educated; this is grammatically incorrect.
 - b. The poet had to add they to make the rhythm right.
 - c. The poet did not want to start with the title, which is "The Mountains Are a Lonely Folk."
 - d. The poet wanted to make the line suggest the sounds of the speech of the people who lived in the mountains.
2. If the mountains were to make complaint, it would most likely, according to the author, be heard by which of these?
- a. The clouds.
 - b. Soldiers guarding them.
 - c. The forests.
 - d. The mountain folk.

VII. (Con't.)

3. Which of the following pictures do you not see as you read the poem?
 - a. The mountains standing like soldiers, with clouds about their tops.
 - b. The mountains resting, with the trees like a cover around their feet.
 - c. The mountains in some way holding up the sky.
 - d. People sitting on their porches in lonely mountain cabins.
4. Which of the following best sums up what the author seems to be saying?
 - a. The mountains do not need people; they have other companions.
 - b. A person, looking at the mountains, wonders if they are not in some way like people and therefore lonely.
 - c. Mountains are glad to have people around.
 - d. Mountains are necessary to hold up the sky.

VIII. What are the most important things in life? What do you think is important to this poet?

When I have fears that I may cease to be
 Before my pen has gleaned my teeming
 brain,
 Before high-piled books, in charactery,
 Hold like rich garnerers the full ripened
 grain;
 When I behold, upon the night's starred face,
 Huge cloudy symbols of a high romance,--
 And think that I may never live to trace
 Their shadows, with the magic hand of
 chance;
 And when I feel, fair creature of an hour,
 That I shall never look upon thee more,
 Never have relish in the faery power
 Of unreflecting love;--then on the shore
 Of the wide world I stand alone, and think
 Till love and fame to nothingness do sink.

- VIII. 1. The poet compares writing to which of these activities?
 - a. Writing is compared with harvesting crops and the book to a storage place.
 - b. Writing is compared to standing on a shore.

VIII. (Con't.)

- c. Writing is compared to looking at faery land.
 - d. Writing is compared with fearing death.
- 2. Night seems to fill the poet with a very special kind of vision in which he does which of these?
 - a. Writes a story he has seen in the stars and clouds.
 - b. Is afraid of shadows.
 - c. Feels as timeless as the stars.
 - d. Sees a story but realizes that he will not live to write it.
- 3. When the poet speaks of standing alone on the shore, what does he probably mean?
 - a. He is on the beach at night, looking at the stars.
 - b. He is in a crowd on a beach, but he is lonely because he is going to die.
 - c. He is a young man, looking over the life that he will never have time to live, not a real sea.
 - d. He is an old man, and the sea is his life.
- 4. When the poet realizes that his life is nearly over, he does not do which of these things?
 - a. Regret that he will lose the love of a "fair creature."
 - b. Decide that fame is the most important thing in life.
 - c. Look at life in such a way that fame and love become less important.
 - d. Find an answer to his grief within himself.

- IX. The man described in this poem is excited, but he is quite aware of the things around him. How many ways can you find in which the poet notes his surroundings?

The gray sea and the long black land;
 And the yellow half-moon large and low;
 And the startled little waves that leap
 In fiery ringlets from their sleep,
 As I gain the cove with pushing prow,
 And quench its speed in the slushy sand.

Then a mile of warn sea-scented beach;
 Three fields to cross till a farm appears;
 A tap at the pane, the quick sharp scratch

IX. (Con't.)

And blue spurt of a lighted match,
 And a voice less loud, through its joys and
 fears,
 Than the two hearts beating each to each!

- IX. 1. Which of these is the best statement about the narrator, the "I" of the poem?
 - a. "I" had never been at this spot before.
 - b. "I" had waited until the moon was ready to set.
 - c. "I" knew the way to the window.
 - d. "I" was afraid he might not be welcome.
2. When does the story probably take place?
 - a. Just before sun-up.
 - b. At the last full moon of the winter.
 - c. During the summer, soon after the rising of the moon.
 - d. Just at dusk.
3. How do the colors mentioned in the poem contribute to the effect of the story?
 - a. Colors are bright and happy, reflecting excitement.
 - b. Colors are dark and somber, reflecting fear.
 - c. The colors contrast the moon and its reflection on the water with the dark colors of night, showing two moods.
 - d. The colors are just added details which are pretty but are not necessary to the story.
4. Which statement about the sounds in the poem is most appropriate?
 - a. The low, quick sounds convey excitement.
 - b. The quiet whispers show the peaceful setting.
 - c. The sounds are not important in understanding the poem.
 - d. The sounds are short, sharp, low sounds which seem very loud to the two people.
5. How do we know that the man was aware of the things around him on the beach?
 - a. The author tells us the sounds he heard on the beach.
 - b. The author tells us the things he saw on the beach.

IX. (Con't.)

- c. He could hear his own heart-beats on the beach.
 - d. The poem tells us what he saw, felt, and smelled on the beach.
- 6. The poet wrote a companion to this poem. Which of these titles suggests most clearly the way in which it might be a sequel (or follow-up) of this poem?
 - a. "Home Thoughts"
 - b. "Sea Fever"
 - c. "Sea Gypsy"
 - d. "Parting at Morning"
- 7. What kind of story seems to be suggested by this poem?
 - a. A love story
 - b. A spy story
 - c. A war story
 - d. A poem of emotion without a story
- X. In this part of a story you are given a picture of the way a man came into his house. Try to decide why he acted as he did, and why his wife acted as she did.

Mr. Morehouse stormed into the house.
 "Where's the ink?" he shouted at his wife as soon as his foot was across the doorsill.

Mrs. Morehouse jumped guiltily. She never used ink. She had not seen the ink, nor moved the ink, nor thought of the ink, but her husband's tone convicted her of guilt of having borne and reared a boy, and she knew that whenever her husband wanted anything in a loud voice, the boy had been at it.

"I'll find Sammy," she said meekly.

When the ink was found, Mr. Morehouse wrote rapidly, and he read the completed letter and smiled a triumphant smile. "That will settle that crazy Irishman!" he exclaimed. "When they get that letter he will hunt another job, all right."

- X. 1. Why did Mr. Morehouse storm at his wife?
 - a. He thought that the crazy Irishman had the ink.
 - b. He thought that she had hidden the ink or put it away.

X. (Con't.)

- c. He knew that Sammy had been using it and had left it out of its usual place.
 - d. He hoped that she would know where it was and would bring it to him immediately.
- 2. What kind of man was Mr. Morehouse?
 - a. Cruel; his wife was afraid of him.
 - b. Quick tempered and impulsive when he thought something should be done; he wrote the letter immediately.
 - c. Some kind of judge; he convicted his wife of guilt.
 - d. Careless; he wrote rapidly.
- 3. Mrs. Morehouse jumped guiltily. Why?
 - a. She never used ink and the supply had dried up.
 - b. She wasn't a very good housekeeper and it was lost.
 - c. Her husband had asked her to get some ink and she forgot.
 - d. She was sure that Sammy had probably used the ink and left it out of place; if he had lost something of his father's, it was partly her fault.
- 4. From the way this part of the story is written, what kind of story do you think this is a part of?
 - a. A sad story in which the father does not understand the boy and drives him away from home.
 - b. A sad story in which the parents quarrel all the time and the boy is not loved.
 - c. A funny story in which the letter is written because of some crazy misunderstanding between the "Crazy Irishman" and Mr. Morehouse.
 - d. A story of discrimination in which Mr. Morehouse has it in for all foreigners and tries to get the Irishman fired.

APPENDIX C

STATISTICAL SUMMARIES

Table C.1. Chi-square analysis of significance of associations between answers and scores on each of the three sections of the SAT and the CTMM.

Question Number	Type of Question* or Response		Paragraph Meaning	Word Meaning	Language	CTMM
S	I 1	Visual imagery, Character	--	--	--	--
S	I 2	Visual imagery, appropriateness	--	--	--	.05
S	I 3	Visual imagery	.01	.01	--	--
S	I 4	Visual imagery	.05	--	.05	--
L	I 1	Character, visual imagery	--	.05	.02	.05
L	I 2	Appropriateness, total imagery	--	--	.05	--
L	I 3	Visual imagery, symbolism	.05	.05	--	.02
S	II 1	Total sensory, tally	.001	.001	.01	.01
S	II 2	Total sensory, order and number	.01	.01	--	--
S	II 3	Literal meaning, poetic statement	--	.01	--	--
S	II 4	Taste and touch, total sensory	.01	--	--	.05

Table C.1. Continued

Question Number	Type of Question or Response		Paragraph Meaning	Word Meaning	Language	CTMM
L II 1	Total sensory		--	--	--	--
L II 2	Taste and touch, total sensory		--	.01	.001	--
L II 3	Literal meaning		.02	.05	.01	.01
S III 1	Total sensory, tally		--	--	--	--
S III 2	Synaesthesia, sensory		--	--	--	--
S III 3	Visual-color		--	--	--	--
S III 4	Imagination, character		--	.02	--	--
S III 5	Inspiration-experience as source		.05	.05	.05	--
L III 1	Total sensory		--	.001	.02	.01
L III 2	Character		.02	.001	.05	.01
L III 3	Narrative, total sensory		.05	.01	.05	--
S IV 1	Visual imagery and figurative meaning		--	--	--	--
S IV 2	Visual--brightness, tally		.02	.02	.001	.05
S IV 3	Visual-shape, figurative <u>vs.</u> literal meaning		--	--	--	--
S IV 4	Visual imagery and literal meaning		--	--	--	--
S IV 5	Literal <u>vs.</u> figurative meaning		.01	.05	.05	--

Table C.1. Continued

Question Number	Type of Question or Response		Paragraph Meaning	Word Meaning	Language	CTMM
L	IV 1	Narrative, total sensory	.001	--	--	--
L	IV 2	Sight-brightness	--	--	--	--
L	IV 3	Sight-shape, figurative meaning	.01	.05	.01	--
L	IV 4	Literal meaning, symbolism	.01	--	.05	--
S	V 1	Touch and kinesthetic imagery	.05	.05	--	--
S	V 2	Literal meaning, word meaning	.02	.05	--	--
S	V 3	Literal meaning, kinesthetic	--	--	--	--
S	V 4	Literal meaning, connota- tive meaning	--	--	--	--
L	V 1	Touch, kinesthetic imagery	--	--	--	--
L	V 2	Literal meaning, connota- tive meaning	.001	.001	.001	.01
S	VI 1	Literal meaning, word meaning	.02	.001	.02	.05
S	VI 2	Connotative meaning	.01	.001	.01	.001
S	VI 3	Total sensory	.02	.02	.05	--
S	VI 4	Denotative meaning	.02	.001	.001	.001
S	VI 5	Connotative meaning, appropriateness	--	.001	.01	.01
S	VI 6	Connotative meaning, departure	.001	.001	.02	.001

Table C.1. Continued

Question Number	Type of Question or Response	Paragraph Meaning	Word Meaning	Language	CTMM
S VI 7	Literal interpretation	.05	.02	--	.001
L VI 1	Literal meaning, word meaning	--	.05	--	--
L VI 2	Connotative meaning, literal meaning	.001	.001	.05	.01
L VI 3	Connotative meaning, appropriateness	.05	.02	--	--
S VII 1	Sound, diction, intuitive thinking	--	--	--	--
S VII 2	Figurative meaning, imagistic meaning	.001	.001	.02	.001
S VII 3	Visual imagery	--	.01	.01	.001
S VII 4	Connotative meaning, allegorical	--	--	--	--
L VII 1	Diction, intuitive thinking	.02	.01	--	.01
L VII 2	Literal meaning	--	--	.001	.01
S VIII 1	Figurative meaning	.001	.001	--	.01
S VIII 2	Visual imagery, connota- tive meaning	--	--	--	--
S VIII 3	Symbolic meaning	--	--	--	--
S VIII 4	Literal and symbolic meaning	.05	--	--	.05
L VIII 1	Literal meaning	.01	.01	--	--

Table C.1. Continued

Question Number	Type of Question or Response	Paragraph Meaning	Word Meaning	Language	CTMM
L VIII 2	Symbolic and literal meaning	--	--	--	--
L VIII 3	Symbolic and literal meaning	--	--	--	--
S IX 1	Literal and connotative meaning	.001	.001	.01	.001
S IX 2	Sight-brilliance, connota- tive meaning	--	.05	.05	.01
S IX 3	Sight-color, affective	--	--	--	--
S IX 4	Sound, affective	.01	--	.01	.01
S IX 5	Total sensory	--	--	--	--
S IX 6	Connotative meaning, contrast	.05	.05	--	--
S IX 7	Connotative, mood	--	--	--	--
L IX 1	Narrative, mood	--	.001	.001	.001
L IX 2	Sight-color, affective	.02	--	.05	.01
L IX 3	Sound	.02	.02	.01	--
L IX 4	Total sensory	.01	--	--	--
L IX 5	Connotative meaning, appropriateness	.001	.001	.001	.01
S X 1	Extension of meaning, mood	.05	.01	--	--
S X 2	Humor, mood	--	--	--	--
S X 3	Character, mood	--	--	--	--

Table C.1. Continued

Question Number			Type of Question or Response	Paragraph Meaning	Word Meaning	Language	CTMM
S	X 4		Humor, mood, connotative meaning	--	--	--	--
L	X 1		Narrative, extension of meaning	--	--	--	--
L	X 2		Character	--	--	--	--
L	X 3		Character, mood	.01	.05	.05	--
L	X 4		Mood, narrative, connota- tive meaning	--	--	--	--

*On all short-form questions and on odd-numbered long-form questions, N=294. On even-numbered long-form questions, N=133.

Table C.2. Chi-square analysis of associations between categories assigned long-form answers and answers selected on short-form questions.

Questions				Level of Significance
L	I 1	S	I 1	---*
L	I 2	S	I 2	---
L	I 3	S	I 3	---
L	I 3	S	I 4	.05
L	II 1	S	II 1	---
L	II 1	S	II 2	---
L	II 2	S	II 4	---
L	III 1	S	III 1	.001
L	III 1	S	III 2	---
L	III 1	S	III 3	---
L	III 2	S	III 4	.001
L	IV 2	S	IV 2	---
L	V 1	S	V 1	.01
L	V 2	S	V 3	.05
L	V 2	S	V 4	---
L	VI 1	S	VI 1	.05
L	VI 1	S	VI 5	.001
L	VI 2	S	VI 2	.02
L	VI 2	S	VI 6	.001
L	VI 3	S	VI 4	.02
L	VI 3	S	VI 5	.01

Table C.2. Continued

Questions		Level of Significance
L VI 3	S VI 6	---
L VI 3	S VI 7	---
L VII 1	S VII 1	.01
L VIII 1	S VIII 2	.01
L VIII 1	S VIII 3	.05
L VIII 1	S VIII 4	---
L VIII 2	S VIII 1	.05
L VIII 3	S VIII 3	---
L IX 1	S IX 1	.001
L IX 1	S IX 7	.01
L IX 2	S IX 3	.01
L IX 3	S IX 4	.01
L IX 4	S IX 5	.02
L IX 5	S IX 6	---
L X 1	S X 1	---
L X 2	S X 2	---
L X 3	S X 3	---
L X 4	S X 4	---

*Because of the nature of some questions, analyses were run only on these thirty-nine pairs.

Table C.3. Chi-square analysis of questions showing significant differences between responses of boys and girls on essay and multiple-choice answers.

Question		Level of Significance	Comments
L	I 3	.02	As with other long-form answers, difference largely in maturity of answers, with greater number of boys in Categories III and IV
S	III 4	.05	More than half of boys and nearly three-fourths of girls select "d." Boys also choose "didn't like school."
L	III 2	.001	More girls in Category I; more than half of boys in Category III.
L	V 2	.001	Literal meaning; better understood by girls
L	VII 1	.001	Diction, better answers by girls
L	VII 3	.001	Girls about evenly divided in first three categories; boys 60% in III
S	IX 7	.05	(Discussed in detail in Chapter IV)
L	IX 1	.01	Category IV percentage same; more girls in I and II
L	IX 2	.01	As with other questions on this poem, differences lie in understanding as well as writing
L	IX 3	.001	Sound images
L	IX 4	.01	Total sensory
L	IX 5	.01	Title--appropriateness
S	VI 6	.01	(Discussed in detail in Chapter IV)
S	VI 7	.01	(Discussed in Chapter IV)

Table C.3. Continued

Question	Level of Significance	Comments
L VI 2	.05	List of favorite things
L VI 3	.01	Title
S VIII 3	.05	Figurative meaning (Discussed in Chapter IV)

Table C.4. Chi-square analysis of questions showing significant differences between responses of year groups on essay and multiple-choice answers.

Long Form Questions	Level of Significance
L I 1	.05
L I 3	.001
L VII 3	.01
L IX 3	.05
L IX 5	.01
Short Form Odd Numbers*	
S I 2	.02
S III 5	.001
S V 2	.05
Short Form Even Numbers**	
S II 1	.02
S II 2	.05
S IV 2	.01
S VI 2	.01
S VI 4	.02
S VI 6	.001
S VI 7	.001
S X 1	.05
S X 4	.01

*The long form of these questions answered by both year groups. N=294.

**The long form of these questions answered by the first year group only. N=133.

Table C.5. Percentage of answers going to each item of the short-form questions, by Total Population and by High Creative-High Intelligence, High Creative, and High Intelligence groups.*

Question Number	High Creative-High Intelligence N=14				High Creative N=20				High Intelligence N=19				Total Population N=241			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
S I 1	--	--	--	100	05	05	--	90	15	--	--	84	16	01	02	80
S I 2	07	35	42	14	--	65	30	05	05	42	47	05	08	42	37	13
S I 3	85	--	07	07	80	10	--	10	89	10	--	--	77	11	04	08
S I 4	--	79	21	--	--	85	15	--	05	78	15	--	07	62	27	03
S II 1	14	71	14	--	15	50	35	--	21	63	16	--	23	46	30	--
S II 2	--	--	100	--	--	05	90	05	--	--	95	05	01	06	85	09
S II 3	07	93	--	--	--	100	--	--	--	95	--	05	07	77	04	12
S II 4	57	--	07	36	50	--	05	45	53	--	05	42	32	06	09	53
S III 1	36	57	--	07	15	80	--	05	37	58	--	05	31	60	02	06
S III 2	--	21	43	35	--	15	75	05	11	11	58	21	08	16	46	29
S III 3	--	36	57	07	--	15	85	--	--	32	63	05	01	20	77	02
S III 4	07	--	29	64	--	--	25	75	05	--	21	74	08	02	26	64
S III 5	--	93	--	07	--	95	05	--	--	95	--	05	14	68	03	13
S IV 1	--	86	14	--	--	70	25	05	--	68	21	11	01	73	20	05
S IV 2	--	21	79	--	--	40	55	05	--	47	47	05	09	47	42	02
S IV 3	--	100	--	--	--	95	05	--	--	95	--	05	06	90	02	03
S IV 4	07	86	--	07	05	95	--	--	--	94	--	05	04	89	02	04
S IV 5	--	--	07	93	--	--	--	100	--	--	05	95	--	01	07	92
S V 1	--	93	07	--	--	95	--	--	--	95	05	--	08	76	08	08
S V 2	07	21	--	71	15	30	--	50	21	16	--	63	22	22	06	50
S V 3	36	29	36	--	20	30	45	--	16	26	58	--	30	25	44	--
S V 4	14	71	14	--	05	70	20	--	--	58	42	--	04	57	31	08

Table C.5. Continued

Question Number	High Creative- High Intelligence N=14				High Creative N=20				High Intelligence N=19				Total Population N=241			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
S VI 1	--	14	86	--	--	05	80	10	05	11	79	05	02	15	63	19
S VI 2	--	--	100	--	--	--	80	15	05	05	79	11	01	08	62	28
S VI 3	14	--	--	86	30	--	--	65	32	--	05	63	37	06	05	52
S VI 4	86	07	--	07	80	--	10	05	84	05	05	05	57	07	24	12
S VI 5	36	07	57	--	45	10	40	--	37	05	58	--	43	09	40	08
S VI 6	14	07	--	79	30	--	--	65	16	--	--	84	28	20	10	41
S VI 7	86	--	--	14	80	05	--	10	63	--	21	16	46	14	19	29
S VII 1	--	29	07	64	--	35	10	50	--	32	11	58	01	33	18	48
S VII 2	64	--	21	14	60	--	20	15	68	11	11	11	47	16	14	22
S VII 3	07	--	07	85	--	05	05	85	05	--	05	89	05	06	09	80
S VII 4	14	79	07	--	--	95	--	--	11	84	05	--	11	82	06	--
S VIII 1	71	--	--	29	65	05	--	25	63	05	--	32	46	10	09	35
S VIII 2	08	--	14	79	10	--	15	70	16	--	16	68	12	06	18	63
S VIII 3	07	07	64	21	05	05	60	25	--	21	42	37	08	12	51	29
S VIII 4	07	50	21	21	10	55	10	20	11	53	16	21	11	41	24	23
S IX 1	--	29	57	14	05	30	35	25	--	16	68	16	17	23	34	24
S IX 2	21	--	64	14	10	--	70	15	11	--	74	16	08	04	61	25
S IX 3	--	14	86	--	--	15	75	05	16	37	47	--	06	23	66	03
S IX 4	57	29	--	14	40	35	10	10	32	47	05	16	26	40	06	06
S IX 5	07	07	--	85	05	15	--	75	05	--	05	89	08	12	04	75
S IX 6	14	--	--	86	20	05	05	65	05	05	10	79	18	14	09	58
S IX 7	71	--	07	21	80	--	--	15	63	--	05	32	49	06	04	39

Table C. 5. Continued

Question Number	High Creative- High Intelligence N=14				High Creative N=20				High Intelligence N=19				Total Population N=241			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
S X 1	07	--	50	29	--	10	50	35	--	16	58	26	01	10	52	34
S X 2	--	86	--	--	--	95	--	--	05	89	05	--	02	87	06	02
S X 3	--	--	--	86	--	--	--	95	--	--	--	100	01	01	03	92
S X 4	07	21	42	14	05	20	35	35	16	26	32	26	11	14	37	34

*Totals vary from 100 because of rounding and because of failure of a few students to complete every response.

APPENDIX D

Number _____

RECAP

1. In relation to others in your class did you
 - a. 41 a. finish earlier than most?
 - b. 66 b. finish about the middle?
 - c. 30 c. finish among the last?
 - d. 13 d. happen to be absent part of the time and not able to tell where you finished?
2. Did you
 - a. 57 a. listen to each tape only once.
 - b. 26 b. listen more than once to one tape.
 - c. 54 c. listen more than once to several tapes.
 - d. 16 d. listen as little as possible and depend on reading.
3. In answering the short-answer form of the questions, did you
 - a. 45 a. find many answers you'd considered before?
 - b. 19 b. find some answers that sounded too easy?
 - c. 76 c. find some completely different ideas?
 - d. 46 d. think some answers were what you'd tried to say before?
4. On the whole, did you understand better
 - a. 50 a. the poems on which you wrote the answers out?
 - b. 35 b. the poems which were in short answer form only?
 - c. 54 c. some of each. Having two kinds of answers didn't make any difference.
 - d. 7 d. neither. All were easy.
 - e. 6 e. neither. All were hard.
5. Of the essay answer selections, which was your favorite?
 - a. 18 a. I, "In the Beginning/ The sun is a huntress young,"

- b. 41
 - c. 17
 - d. 24
 - e. 48
- b. III. "He saw himself a strong, heroic, brilliant . . ."
 - c. V. "In May, when sea-winds pierced our solitudes,"
 - d. VII. "The Mountains they are silent folk,"
 - e. IX. "The gray sea and the long black land."

6. Of the short-answer selections, which did you like best?

- a. 6
 - b. 47
 - c. 14
 - d. 32
 - e. 55
- a. II. "Music, when soft voices die,"
 - b. IV. "Across the years he could recall/ His father . . ."
 - c. VI. "I love preliminary things"
 - d. VIII. "When I have fears that I may cease to be"
 - e. X. "Mr. Morehouse stormed into the house."

7. Of all the selections, which gives you a desire to read more of the story?

X-79; IX-26; IV-11 _____ (Selection number)

Which was most difficult?

IX-27; VIII-25; _____ (Selection number)

V-23; II-16

8. The use of the tape recorder

- a. 63
 - b. 46
 - c. 38
 - d. 21
- a. made the selection easier to understand.
 - b. caused the listener to think more about the selection.
 - c. made me take more time to answer and thus perhaps contributed toward a better answer.
 - d. wasted time; I could have done as well or better without listening.

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