Based upon a theory of intelligence proposed by Alfred Binet, this paper describes a cognitive process approach to poetry instruction. After discussing the suitability of the study of poetry as a means of enhancing students' reading comprehension, the paper summarizes Binet's theory, which distinguishes four successive intellectual operations: (1) "comprehension," i.e., the identification and comprehension of individual facets of that which is being observed; (2) "invention," i.e., the synthesis of the individual components; (3) "direction," i.e., the perception of the main theme or intellectual direction of that which is being observed; and (4) "censorship," i.e., the ability to concentrate on the intellectual direction at hand and to discern changes in direction. The paper then describes how these four operations can provide definitions of the cognitive skills needed to understand poetry. First, students must be able to identify and understand words within a poem that have an abstract or unconventional meaning. Then, they must be able to discern parallels between words used within the poem in order to begin the process of synthesis. Finally, they must be able to recognize the themes and intellectual directions of a poem, and recognize "structural joints" within the poem that signify changes in that theme or direction. Throughout the paper, illustrative passages from poems are provided. (JP)
COGNITIVE PROCESS INSTRUCTION
AND THE COMPREHENSION OF POETRY
OR
DOES THE TEACHING OF POETRY
HAVE A PLACE IN DEVELOPMENTAL
EDUCATION?

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In the winter of 1976-1977, I was teaching a Survey of British Literature and during the Christmas break between quarters was despairing over my students' inability to understand poetry. I happened across Arthur Whimbey's INTELLIGENCE CAN BE TAUGHT at a local department store, saw that it dealt at length with reading comprehension, devoured it, and began working on a method, based on ideas I got from Whimbey's book, of using poetry to increase reading comprehension. Most of the books of literary criticism I was familiar with—books that were supposed to help one understand poetry better—were too sophisticated for even my best students. And the reading-comprehension workbooks that contained any poetry at all, usually only posed a few pedestrian questions and gave students no help whatsoever in reading poems for themselves.

One of the first things that struck me in Whimbey's book was the description of good and poor readers. To someone like me, who had just
helped a class struggle through several books of PARADISE LOST and who knew the class was about to encounter Blake's Tyger and Keats's Nightingale, Whimbey's works seemed to hold out hope:

The primary cause of poor comprehension is that the unskilled reader has not learned to attend carefully to meaning . . . . Poor comprehension is a facet of low intelligence; and low intelligence is a habitual thinking pattern characterized by little attention to the analysis and discernment of exact relations. To gain improvement, the poor reader must be taught the features of good comprehension. He must have the minute details of complete understanding demonstrated and illustrated to him.

I would like to do just that for unskilled readers in college by using the medium of poetry.

Why poetry? I can give a number of lesser reasons and one major reason. The lesser ones are that being able to understand poetry is an irreplaceable joy. And that poetry is part of our cultural heritage, and without knowing something about the great poems, a person cannot be truly educated. And that life without poetry is, as Wallace Stevens said, poverty-stricken. But the main reason for helping poor readers make sense out of poetry is that the way language is used in poetry is more challenging and mentally stimulating than the way it is used anywhere else. More is going on in a poem than in any other form of discourse, and these challenges to understanding teach a mental agility that helps in all kinds of problem solving, poetic and non-poetic alike. All of one's faculties are brought into play, emphasis on all and play.

If you look at the specific differences between the acts of reading
poetry and informative prose, you see that whereas in the prose, words are held to one of their dictionary definitions, those in poetry often have several meanings, none of which may be sanctioned by a dictionary. Literary critics, in explaining this difference, have pointed out that the connotations of words are molded by particular contexts. Love connotes one thing in Yeats's line "We sat grown quiet at the name of love" and quite another in the title of the insipid newspaper cartoon "Love is ... smiling at her when your stomach aches." And what critics say about the malleability of connotations is true. But someone wanting to increase his reading prowess may benefit as much from looking at how the context within a poem can serve as a guide to unusual denotations of a word as he can by studying connotations. A reader must develop some real mental agility to enable him to comprehend the denotations of, for instance, "elbow'd" in Whitman's "far-swooping elbow'd earth--rich apple-blossom'd earth." Other similar challenges more frequently encountered in poetry than in informative prose are that the reader see the impractical parallels between ideas, see the visualizable and even the unvisualizable images, and see the implications, ambiguities, and double meanings that lurk everywhere.

The method of teaching students how to understand poetry that I will describe in a moment is an attempt to use cognitive process instruction in a literary rather than scientific field and is also an attempt to use Alfred Binet's definition of intelligence as a basis for improving cognitive skills.

CPI, as John Lochhead has said, makes it "possible to isolate specific cognitive skills and to design instructional material appropriate for each
Since the instructional components have well-defined objectives, one can, in principle, determine how well each is working and modify those that are ineffective," (CPI (1979), p. 2.). A great deal of work is being done on defining the cognitive skills and their appropriate objectives in mathematics and the sciences, but no one has yet attempted such a program with poetry. Such an attempt might prove doubly rewarding, since the teaching of poetry can stand all the resuscitation it can get and since poetry might turn out to offer something to CPI that mathematics and the sciences cannot.

Alfred Binet, whose definition of intelligence contributed to the theoretical foundation of CPI, distinguished four operations that constitute every mental action of the intellect. Since his definition, which can be found in the chapter entitled "Intelligence: A Learned Skill" in Whimbey's book, is the starting point for my own attempt to define the cognitive skills necessary for understanding poetry, I will quote it in full:

In our opinion, intelligence, considered independently of phenomena of sensibility, emotion and will, is above all a faculty of knowing, which is directed toward the external world, and which labors to reconstruct it as a whole, by means of the small fragments of it which are given to us. What we perceive of it is element a, and all the very complicated work of our intelligence consists in uniting with this first element a second element, b. All knowing is thus essentially an addition, a continuation, a synthesis, whether the addition take place automatically as in external perception . . . or after a conscious search . . . But note well that in this addition to
the element \(a\), there is already a host of faculties at work: comprehension, memory, imagination, judgment, and above all, speech. Let us retain only the most essential, and, since all this culminates in the invention of an element \(b\), let us call the operation an invention, which is executed after a comprehension. The operation cannot be performed without our knowing what the question is, without our adopting a certain line, from which we do not deviate; thus a direction is necessary. . . .

The ideas must be judged as fast as they are produced and rejected if they do not fit the end pursued; there must, thus, be censorship. Comprehension, invention, direction, and censorship; intelligence is contained in these four words.

(Intelligence Can Be Taught, (1976), p. 111.)

Binet almost speaks of the first operation, comprehension, as a given, an initial perception that has some meaning to the, let us say, reader. What is most interesting here is Binet's second step, which combines three simultaneous but separable operations. The reader moves on from what he has initially grasped, but must relate whatever new ideas he meets or constructs to his beginning idea. This relation provides him with a sense of direction and points the way towards a further, new increment of meaning. While he is making this connection, he must evaluate it to see whether there might be other ideas that will relate more meaningfully to the initial one or, in subsequent steps, to the whole web of meanings he is exploring or constructing. I would like now to show how these four operations can provide definitions of the cognitive skills and their corresponding objectives for enabling a reader to understand poetry.

I don't want even to consider the philosophical problems buried in
Binet's term "comprehension" or in the notion of a reader's grasping first of all the meaning of one word dissociated from its context in a particular poem. In other words, I cannot conceive of any cognitive skill that would acquire the meaning of a word without taking into account the word's context. I can, though, define one cognitive skill that focuses a reader's attention on single words while not consciously emphasizing their connections with their surroundings. This skill is especially important for the understanding of poetry and is not exercised through cognitive process instruction in mathematics or the sciences. The skill I refer to is that of singling out words used in a striking manner. Poor readers pass over these words obliviously; through practice, such readers can be made to slow down and sharpen their awareness of striking words. (I am referring here to words like that "elbow'd" in Whitman's "far-swooping, elbw'd earth.") This objective is a first step towards poetic comprehension.

In my opinion, the individual differences in subjective responses to poetry are often over-emphasized. If a definable cognitive process is involved in distinguishing the striking words from their more comfortable or conformable peers, then we should be able to agree on which words they are. Less able readers than the present audience should grow in confidence and skill when they have succeeded in pointing out the striking words in a given passage. Here is a sample exercise, with the passages arranged from the relatively obvious to the relatively covert.

**COMPREHENSION**

Find the single most striking word in each of these passages:

1. Shelley addressing the west wind:
   Thou on whose stream, mid the steep sky's commotion,
   Loose clouds like Earth's decaying leaves
   Are shed . . . .

2. For whose path the Atlantic's level powers
   Thou [West Wind]
3. Smile O voluptuous and cool-breath'd earth!
   Earth of the slumbering and liquid trees!

4. Hopkins writes:
   Sometimes a lantern moves along the night,
   That interests our eyes. And who goes there?
   I think; where from and bound, I wonder, where,
   With, all down darkness wide, his wading light?

5. Dickinson writes:
   That phraseless Melody—
   The wind does—working like a Hand,
   Whose fingers Comb the Sky—
   Then quiver down—with tufts of Tune—
   Permitted Gods, and me—

6. Or Hopkins again:
   The world is charged with the grandeur of God.
   It will flame out like shining from shook foil . . . .

7. Here's a whole poem by Charles Reznikoff:
   About an excavation
   a flock of bright red lanterns
   has settled.

The words that strain most against the norms of usage are:

1. steep, stream, loose, and shed
2. level, then powers
3. liquid, then slumbering
4. wading
5. tufts, then phraseless, comb, and quiver
6. charged, then shook
7. flock or perhaps settled

Binet's second operation, "invention," you will recall, is "essentially an addition, a continuation, a syntheses." Just as this operation is the heart of Binet's definition of intelligence, so it gives rise to several cognitive skills that are at the heart of understanding poetry. The broad term "invention" might, for our present purposes, be translated as "thinking comparatively." I am not going to talk about the kinds of comparisons that
are met with in mathematical and scientific CPI, but a kind that is peculiar to poetry—the parallelism of words. Of course, parallels exist between certain words in any discourse, but the rich texture of poetry grows out of a much denser web of parallels than can be found anywhere outside of poetry. Showing a reader how to concentrate his attention on tracing these connections within a poem yields several rewards. First, the continuity of ideas, which may not be apparent at first glance, becomes clearer. Second, words that are used abnormally may be clarified by their associates. Let me illustrate with another set of samples. The object here is to find the words that echo or parallel the underlined word.

IN ECTION

Seeing the Parallels between Words

1. Which words repeat the title of Keats's "Ode on a Grecian Urn"?
   Thou still unravished bride of quietness,
   Thou foster child of silence and slow time,
   Sylvan historian, who canst thus express ...
   (find five)

2. Looking for parallels helps a reader sort out antitheses like this one from Paradise Lost:
   Pleasure about me, so much the more I feel Torment within me. ...
   (find four sets of parallels)

3. Here's one from Spenser's "Prothalamium":
   Through discontent of my long fruitless stay
   In princes' court, and expectation vain
   Of idle hopes, which still to fly away,
   Like empty shadows, did afflict my brain ...
   (find three, possibly four)

4. This antithesis from Coleridge's "Dejection Ode" is more difficult to sort out than Milton's:
   Hence, viper thoughts, that coil around my mind,
   Reality's dark dream!
   I turn from you, and listen to the wind,
   Which long has raved unnoticed.

5. Here is the opening of Bly's "Surprised by Evening":
   There is an unknown dust that is near us,
   Waves breaking on shore just over the hill,
   Trees full of birds that we have never seen,
Nets drawn down by dark fish.
(find two sets of four)

The parallels are as follows:

1. Thou--bride--child--historian--who

2. the more--so much the worse
   I see--I feel
   pleasure/content
   about me/within me

3. fruitless--vain--idle--empty?

4. hence--I turn from you
   viper thoughts--dark dream/wind
   viper--coil

5. unknown--over the hill--never seen--dark
   dust--waves--birds--fish

The broad operation Binet called "direction" encompasses several cognitive processes related to the understanding of poetry. As a reader moves through a poem, he must remain alive to a much broader range of possible directions than when reading non-poetic writing. At the same time, the reader of poetry must censor directions that do not fit with all the details at hand. The importance in reading poetry of these two operations, which must harmonize and yet compete, makes the pedagogy of poetic comprehension a potentially valuable contributor to cognitive process instruction. Since I have been unable in my own thinking to separate Binet's ideas of direction and censorship, I am going to keep them together in the last of the cognitive processes I am trying to define in this paper.

Presumably, any two words, images, sentences, or whatever units of meaning you choose to name, that are related within a poem induce the reader's mind to follow a certain direction to get from the meaning of the first to the meaning of the second. But the necessary direction will stand out in some places more than in others. And it will be most obvious and most important, in places where there is a change in direction. These
places I call "structural joints," and few poems are so brief and simple that they do not have at least one. The cognitive process involved here is recognizing the structural joints (just becoming sensitive to their existence as was done with striking words) and then seeing how the direction changes. Since I cannot reproduce a number of whole poems, I have culled out some structural joints for purposes of illustration. Notice where and how the direction changes in each of these passages.

**DIRECTION AND CENSORSHIP**

Seeing the relations between ideas, and censoring unsupported but possible relations.

1. Here is one from Frost's "Tuft of Flowers":
   And I must be, as he had been,—alone,
   "As all must be," I said within my heart,
   Whether they work together or apart.
   But as I said it, swift there passed me by
   On noiseless wing a bewildered butterfly...

2. Shakespeare was a master of the rapid change of direction in thought. Here is Lear to Goneril:
   I prithee, daughter, do not make me mad.
   I will not trouble thee, my child; farewell.
   We'll no more meet, no more see one another.
   But yet thou art my flesh, my blood, my daughter;
   Or rather a disease that's in my flesh,
   Which I must needs call mine. Thou art a boil,
   A plague-sore, an embossed carbuncle,
   In my corrupted blood. But I'll not chide thee...

3. Here are some lines from Bryant's "Thanatopsis":
   Go forth, under the open sky, and list
   To Nature's teachings, while from all around—
   Earth and her waters, and the depths of air,—
   Comes a still voice—
   Yet a few days, and thee
   The all-beholding sun shall see no more...

   The changes in direction are:

1. ... apart./But as I...

2. ... one another./But yet thou art...
   ... my daughter;/Or rather a disease...
   ... blood./But I'll not chide...
3. ... a still voice/ yet a few
   (where Nature speaks the words beginning with "Yet a few. . .")

   Thè limits of this paper have prevented me from defining and illustrat-
   ing other cognitive processes under each of the operations originally dis-
   tinguished by Binet. The ones I have chosen to discuss are what I consider
   the best cases. If they are indeed isolable cognitive processes, students
   being coached in their effective use should show measurable improvement in
   their understanding of poetry (and, of course, greater enjoyment will
   inevitably follow). A larger value might also accrue from the use of poetry
   in Cognitive Process Instruction. Everyone is aware of the seemingly
   irreversible decline of the humanities in higher education. This erosion
   of an important range of not only academic or cultural but intellectual
   activity can only be slowed if teachers of the humanities can begin to
demonstrate visible changes in their students' intellectual skills. I hope
the method of teaching poetry outlined here is a step in that direction.