The conceptual/integrative complexity scoring manual

Overview

Integrative complexity is scored on a 1–7 scale. Scores of 1 indicate no evidence of either differentiation or integration. The author relies on unidimensional, value-laden, and evaluatively consistent rules for processing information. Scores of 3 indicate moderate or even high differentiation but no integration. The author relies on at least two distinct dimensions of judgment, but fails to consider possible conceptual connections between these dimensions. Scores of 5 indicate moderate to high differentiation and moderate integration. The author notes the existence of conceptual connections between differentiated dimensions of judgment. These integrative cognitions can take a variety of forms: the identification of a superordinate category linking two concepts, insights into the shared attributes of different dimensions, the recognition of conflicting goals or value trade-offs, or the specification of interactive effects and causes of events. Scores of 7 indicate high differentiation and high integration. A general principle provides a conceptual framework for understanding specific interactions among differentiated dimensions. This type of systemic analysis yields second-order integration principles that place in context, and perhaps reveal, limits on the generalizability of integration rules. Scores of 2, 4, and 6 represent transitional levels in conceptual structure. Here the dimensions of differentiation and integration are implicit and emergent rather than explicit and fully articulated.

This manual is based on previous versions developed by research teams at the University of British Columbia and the University of California (Berkeley). The order of authors is alphabetical.
Integrative complexity coding is difficult, in large part, because it does not rely on simple content-counting rules of the sort that some other content analytic approaches employ. Assessing integrative complexity requires the judgment of trained coders, who may have to make subtle inferences about the intended meaning of authors. Coders often make difficult judgments concerning whether differentiation or integration exists in particular statements.

For example, it is frequently difficult to say whether a qualification to an absolute rule has been sufficiently worked out to constitute an alternative or fully differentiated perspective. Passages may fall in the fuzzy boundary zone between scale values. Such cases frequently lead to the assignment of the transition scores 2, 4, and 6, indicating implicit as opposed to explicit differentiation or integration. It is not unusual for expert coders to disagree over score assignments for boundary zone cases, although the disagreements rarely exceed 1 point.

Coders must keep in mind several important aspects of the integrative complexity coding system. First, the system focuses on structure rather than content. There is no built-in bias for or against any particular position. One can advance simple or complex arguments for any of a variety of viewpoints; for example, in favor of or in opposition to capital punishment, choice on abortion, higher military spending, papal infallibility, and so on. The integrative complexity of a person's thoughts on an issue is determined not by the specific beliefs he or she endorses, but by the conceptual structure underlying the positions taken.

Second, it is essential not to allow the coder's personal preferences or biases on an issue to influence the conceptual assessment of a statement. Passages that take controversial moral or political stands may often challenge a coder's objectivity. In such cases, coders may be tempted to score passages with which they agree more highly than passages with which they disagree. Coders should keep in mind that the conceptual structure of the reasoning, and not the content, is being assessed here. Researchers may want to take additional precautions such as ensuring that coders with different political preferences agree in their complexity score assignments and following double-blind scoring procedures in which coders are kept unaware of both the hypotheses being tested and the sources of the text being analyzed.

Third, and as a corollary to the above point, the coder should not always assume that it is better to be more complex. Being complex in one's thinking is no guarantee of being correct. Indeed, it is not hard to identify examples of statements that are highly complex and, in hindsight, obviously wrong (e.g., some of the arguments of those who favored the appeasement of Nazi Germany prior to 1939). It is also not hard to identify examples of highly complex arguments that, in the light of present-day norms, are immoral (e.g., the arguments of anti-abolitionists in pre-Civil War America). The integrative complexity coding system does not rest on assumptions concern-
ing the logical, pragmatic, or ethical superiority of any particular school of thought.

**Measuremnt**

The basic scoring unit refers to a section of material that focuses on one idea. Usually, but not always, this scorable unit consists of a single paragraph. Occasionally a large paragraph in the original material may be broken into two or more scorable units each having a single idea. On the other hand, several paragraphs in the original material may be collapsed into one scorable unit.

A variety of approaches exists for the generation (experimental) or designation (archival) of material that may be coded for integrative complexity. In essence, these approaches fall along a continuum of experimenter control and range from high (i.e., the Paragraph Completion Test, another version of the Sentence Completion Test) to low (archival documents).

The first step in sampling from archival material is to identify the complete pool of available and scorable units (see Unscorables section). From this pool at least five units should then be randomly chosen and scored. The mean of these scores represents the complexity score typically used in analyses. In the case of experimentally generated material, individuals should be instructed to generate at least five paragraphs so that the mean of the five can be calculated to determine the individual's score. If the generated material is all on one topic (e.g., a short essay), the researcher may prefer to use the entire essay as the scorable unit.

We have found that mean complexity scores vary not only as a function of situational variables, but also as a function of the type of population from which the sample is selected. For example, we found the mean complexity score in random college samples to be approximately 2. This differs in specialized samples (e.g., the mean complexity score was closer to 4 in materials from U.S. Supreme Court justices).

**Experimentally generated material**

The Paragraph Completion Test (PCT) was the method of choice in the early years of complexity research. This test has undergone several revisions. People are asked to complete six to nine brief responses, each written in 1 to 3 minutes and based on a sentence stem addressing important domains of the decision-making environment. The basic stems are:

- When I am criticized...
- When I don't know what to do...
- Rules...
- When a friend acts differently...
Confusion...
When I am in doubt...

Because of various problems with the PCT format (e.g., the fact that in most studies the majority of the scores were in the lower range of the scale, between 1 and 2), later versions modified the number of stems, the amount of time allowed, or the topics of the sentence stems.

The currently recommended procedure for the administration of the PCT is to extend the time limit to 10 minutes per stem. In order to avoid subject fatigue and boredom, and to retain a reasonable total time limit for the task, this format usually requires the use of fewer stems. We recommend three, preferably chosen to represent the major decision-making domains included in the original version, namely: relations to authority, interpersonal conflict, and informational uncertainty.

Alternatively, in particular experimental contexts the subject may be asked to write an essay on a topic relevant to the experiment. Such essays would be expected to contain several paragraph units, written with either no time limit or a very generous one, and can serve other research purposes (e.g., to assess attitudes or expectations) besides being coded for integrative complexity. In such cases, the instructions must make clear to the subjects that the composition should reflect opinions, evaluations, or judgments, and should not be merely a descriptive account (which would not be scorable for complexity).

The PCT and its essay variant, the Topic Completion Test (TCT), can be administered in either group or individual sessions. No special equipment is required, except something to write with and something to write on. The measures have been used with both student and adult community samples, both sexes, and many ethnic groups. Beyond obvious basic qualifications (i.e., literacy in whatever language is being used), there have been no particular prerequisites for taking the tests. Instructions and stimuli can remain basically constant across subject groups.

When coding materials are obtained experimentally, indications as to the author's gender, age, or race as well as condition and time of administration should be deleted before materials are ready for coding.

Archival material

The 1–7 scale of differentiation and integration can be used with any connected verbal discourse to which the researcher has access. The materials used for archival studies are generally taken from books or newspapers. The number of units needed from each particular condition (e.g., from specific sources, from given time periods) is determined in advance based on a minimum of five units per data point. The library researcher selects each unit randomly from the total available and makes a photoduplicate. Units
Scoring for conceptual/integrative complexity

should be scored in random order so that all material from one source or person is not scored sequentially. People or place names, and dates, should be deleted from the materials in order to avoid biasing the coder. The person who is coding the data set should be familiar with the topics addressed in the paragraphs. This is especially relevant when coding archival material of an historical or political nature, when knowledge of certain people and events may allow the coder to see different perspectives than would be obvious to a naive coder.

Reliability

 Coders are considered qualified when they reach a correlation of at least .80 with an expert coder (i.e., the practice materials supplied in appendix I of this volume). Ideally, prospective coders would also reach a percentage agreement of 80%. These criteria have been difficult to meet without repeated practice and feedback from trained coders over a period of time. Learning to score texts for complexity has traditionally occurred in workshop training sessions lasting up to 2 weeks and involving detailed examination of problematic cases and group discussion of coding decisions.

 This manual is designed to enable people to code integrative complexity by presenting detailed criteria for assigning each value on the 7-point scale. Clearly, it is best for beginners to discuss the issues raised in the manual with qualified scorers, or – if that is not possible – with other trainees. However, if the beginner has no access to other interested colleagues, we hope that the manual itself is sufficiently self-explanatory to permit the new coder to reach acceptable levels of reliability.

 If an adequate level of agreement is not reached by the time the prospective coder has finished the practice materials, the authors of the manual can provide further samples (see appendix III for instructions on how to order additional practice materials). Learning to score integrative complexity is itself a complex task, and should be approached with the understanding that considerable time and energy will have to be devoted in order to become a qualified coder. Even after agreement with the practice materials has been obtained, qualified coders should reach an intrarater reliability of .80 or 80% on a subsample of data (at least 15% of the data set) each time they begin coding new data.

General Format of the Manual

With the exception of the section on Unscorables, the discussion of each scale score follows a common format. First, a general explanation of the score is given, identifying its unique characteristics. This is followed by the presentation of the critical indicator of that score, which is the aspect that must be identifiable in a passage for it to receive that score. Next, two
Specific indicators are presented and described, with an example of each. Specific indicators are a general guideline as to the types of passages that receive that score. However, it should be clear that the specific indicators are not all-inclusive and that the score can be assigned to materials that do not fit under one of the specific indicators.

For the lower scores (1–3), content flags are presented next. These are specific words or phrases that alert the coder to the possibility that a particular score may be appropriate. They must not be used to justify the score in and of themselves, because any individual word can be incorporated at any level of complexity. For this reason, content flags are not given for the higher-level scores (4–7), where excessive reliance on them is especially likely to be misleading. Explanations of scores given to examples are included for scores of 6 and 7 only, as they are often the most difficult scores for the new coder to learn to recognize.

We are interested in reactions that readers have to the manual and invite comments and suggestions.

**Unscoreables**

The identification and deletion of unsorable statements prior to selecting the final sample ensures the efficient use of the expert coder’s time. Individuals who select the statements to be scored need not be reliable coders themselves, but should at a minimum understand this section on “Unscoreables.” Such knowledge will prevent the sample from being overloaded with unsorable material. Despite screening precautions, it should be realized that some statements in the sample will inevitably be judged unsorable. In coding, such paragraphs should be marked “X” and deleted from further data analyses.

**General explanation**

The main characteristic of an unsorable paragraph is that the author’s rule structure for drawing inferences or making decisions is not evident. There are many reasons why the underlying rule structure might be obscure.

**Specific indicators**

**Clichés.** A paragraph is unsorable if it consists solely of cryptic or glib remarks (e.g., Who cares? So what?) or of clichés (e.g., A stitch in time saves nine; a penny saved is a penny earned).

**Satire and Sarcasm.** When there is considerable ambiguity about
either the object or thrust of a satirical passage, the passage is deemed unscorable.

**Quotations.** Scoring a paragraph that consists primarily of quotations may shed more light on the rule structure of the quotation than on that of the paragraph being scored. The key exception to this methodological rule is when the author comments on the quotations in sufficient detail to reveal the nature of his or her own thinking on the issue.

**Descriptions.** When a paragraph is purely descriptive (i.e., it merely reports the occurrence of events and provides minimal clues concerning the author’s perspective on those events), that paragraph is considered unscorable. Thus, a statement such as the following would be judged unscorable: “Mr. Reagan and Mr. Gorbachev met for four hours in Reykjavik and engaged in detailed discussion of a number of issues of mutual concern. They also discussed a number of regional conflicts.”

There is, it should be stressed, no neat, nonarbitrary line that divides description on the one hand from evaluation and interpretation on the other. The previous statement, for example, becomes scorable by merely inserting a few key terms, such as “Mr. Reagan and Mr. Gorbachev engaged in detailed, sometimes acrimonious but often constructive discussions.”

**Breakdowns in Understanding.** Any paragraph that the reader cannot understand obviously cannot be scored. Breakdowns in understanding may arise for several reasons. Coders may decide to categorize a passage as unscorable if it requires a great deal of special knowledge that they do not possess, if it cannot be adequately understood out of context, or if it appears that the author does not have sufficient command of the language.

**Scorer Uncertainty.** Occasionally the coder cannot decide which of two scores to assign to a paragraph. If the mathematical difference between them is 2 or greater, the paragraph should be categorized as unscorable and discarded. If the difference is less than 2, other qualified coders should be consulted. If no consensus is reached, the mean of the two possible scores can be assigned or the paragraph may be discarded.

**Score of 1**

*General explanation*

There is no sign of either conceptual differentiation or integration at this scoring level. The author relies, without qualification, on a simple, one-dimensional rule for interpreting events or making choices.
Critical indicator

Only one way of looking at the world is considered legitimate. The author either implies or explicitly states that there is one and only one reasonable approach to an issue. This position is typically expressed in the form of an absolute or categorical rule. These absolute rules are often, although not necessarily always, highly evaluative (e.g., “Only an immoral imbecile would believe . . .”). The end result of the application of an absolute rule is, however, always the same: the imposition of a dichotomous category structure (right vs. wrong, socialist vs. capitalist, determinism vs. free will) on the world, with little or no room for ambiguity or shades of gray. The author seeks rapid closure.

Specific indicators

Specific indicators are common ways in which the critical indicator manifests itself. They are not necessary for score assignment but are provided as guides for identifying critical indicators.

Compartmentalization and Rejection of Perspectives or Dimensions. A common characteristic of a score of 1 is the evaluation of stimuli in an all-or-none fashion, without consideration of possible exceptions to, or qualifications of, the evaluative rule. Information is rigidly compartmentalized and, depending on the compartment into which it has been placed, included or excluded from consideration. The author implicitly or explicitly denies that reasonable others could disagree, or that an issue has aspects or dimensions that the author has not considered. Note that the author may go on at great length and provide detailed descriptions, explanations, or examples of the preferred rule. This additional content does not, however, justify a higher score. The author is elaborating on a dominant theme, not introducing alternative perspectives or dimensions.

The real reason why we are not competing effectively with the Japanese is the erosion of the work ethic in America. American workers do not take as much pride as they used to in the products they create in the plants and factories of this country. We hear too many stories of sloppy workmanship, absenteeism, drug addiction, alcoholism, and bad morale on the production lines and in the ranks of management. We won't be able to compete effectively until we regain the old-fashioned sense of pride in a job well done. Anyone who tells you something different just doesn't understand the world of business.

Dominance of a Single Evaluative Rule. Many statements distinguish a variety of specific issues or events, and then lump these issues or events together in a single overall evaluative category. The value judgments of the author permeate and dominate the discussion of specifics. Evaluative
dominance of this sort can take many forms: lengthy lists of the costs of rejected options and the benefits of preferred options, protracted discussion of the vices of one's opponents and the virtues of one's allies ("My opponent is an opportunistic, deceitful, and malicious rascal"; "Comrade Brezhnev has selflessly, thoughtfully, and courageously guided our Party through many difficult times.")

As a traveler I got a glimpse of the misery that prevailed in the world. Poverty, hunger, mental illness - they were the inevitable result of life in this world. And as there was nothing I could do about it, I did not worry.

**CONTENT FLAGS.** The presence of one or more content flags alerts the coder to the possibility that the passage meets the criteria for a particular score. In using such flags as an aid in scoring, bear in mind that they do not in themselves justify any particular score. In many cases, it will be appropriate to assign a score of 1 to paragraphs that contain none of the "content flags," and in many other cases, it will be appropriate to assign higher scores to paragraphs that contain several of these content flags. In short, the mere presence of the words listed subsequently is neither a necessary nor a sufficient condition for assigning a score of 1. Integrative complexity coding cannot be reduced to a simple word count or word co-occurrence count content analysis system. It requires the judgmental process of linguistically competent human beings - a judgmental process that is extraordinarily difficult to capture, for example, in existing Artificial Intelligence programs. Content flags for the score of 1 are words or phrases connoting categorical, all-or-none thinking. Common examples include: absolutely, all, always, certainly, constantly, convinced, definitely, entirely, forever, impossible, indisputable, irrefutable, irreversible, never, solely, surely, unconditionally, undoubtedly, unquestionably.

**SCORE OF 2**

*General explanation*

In a statement assigned a score of 1, the author ignores or rejects alternative perspectives on an issue. In a statement assigned a score of 2, the author recognizes the potential for looking at the same issue in different ways or along different dimensions. Differentiations are, however, emergent rather than fully developed. The author may, for example, qualify a normative rule or causal generalization, or display an awareness of alternative futures. The author may also discuss past events in a way that suggests, but does not develop, new interpretations. On the whole, this scale value represents a transition level between the categorical structure of the score of 1 and the differentiated structure of the score of 3.
Critical indicator

The critical indicator for a score of 2 is the potential or conditional acceptance of different perspectives or dimensions. The author does not explicitly develop the alternate dimension or perspective; nor is it necessary that it be explicitly stated or named. Simple qualification, without elaboration, is sufficient evidence for a score of 2.

Specific indicators

CONDITIONAL ACCEPTANCE OF, OR EMERGENT RECOGNITION OF, OTHER PERSPECTIVES OR DIMENSIONS. The author implies or states that acceptance of a position or policy proposal need not be all-or-none, but a matter of degree that, in turn, hinges on the degree to which a particular condition or goal has been satisfied.

In regard to my own death, when it comes. I really think that my attitude will be influenced by circumstances. I don’t want to die now because there are some obligations I want to fulfill but the day may come when I welcome death.

The author mentions that others may hold perspectives different from his or her own, but does not specify exactly how these perspectives are different. Or the author recognizes that an issue has several components or dimensions but does not elaborate on them.

I read that Haas has married Jarmila, which doesn’t surprise me, for I always expected great things from Haas. But the world will be surprised. Do you know anything more about it?

EXCEPTION TO THE RULE. The author qualifies a generalization or stated perspective or dimension.

The letter said that he loved life but that this was not really living. He said that my mother, his friend, was calling him to her side. He hoped that we would forgive him.

CONTENT FLAGS. Conjunctions such as but, nevertheless, while, however, and though, and qualifier adjectives and adverbs (e.g., probably, almost, usually) may indicate a score of 2.

SCORE OF 3

General explanation

The crucial aspect of a score of 3 is the clear specification of at least two distinct ways of dealing with the same information or stimulus. The author recognizes that these different perspectives or dimensions can be held in
mind simultaneously. The author may also specify conditions under which these perspectives or dimensions are applicable. However, there is no evidence of conceptual integration. Differentiation is the key element of a score of 3.

**Critical indicator**

The critical indicator for a score of 3 is the recognition of alternative perspectives or different dimensions, and the acceptance of these as being relevant, legitimate, justifiable, or valid.

**Specific indicators**

**Multiple alternatives.** One form of differentiation involves recognizing that "reasonable persons" can view the same problem or issue in different ways (the "truth" is not all on one side). Although the speaker may hold one viewpoint, he or she recognizes that others disagree and feels no need to disparage them. The author sees multiple perspectives.

Dear Sir,

I do not insist at all on speedy publication of this story, but do request you to inform me as soon as possible whether you can take it at all. Since you wish to avoid installments, finding room for my story must make problems; of course I realize that. If I nevertheless do not withdraw it of my own accord, my reason is solely that I am especially eager to see it published. But if it is completely out of the question, I could offer you another story, that I also have ready and that comes to only some thirty typewritten pages, so that it would be less dubious a matter, at least in regard to its size.

Differentiation can also take the form of recognizing more than one dimension of an event, situation, issue, person, or object.

I hope the gentle reader will excuse me from dwelling on Particulars, which however insignificant they may appear to grovelling vulgar minds, yet will certainly help a Philosopher to enlarge his thoughts and imagination, and apply them to the Benefit of Publick as well as Private Life, which was my sole design in presenting this and other accounts of my travel to the world.

The scorer must be confident that there are clearly two or more perspectives or dimensions to assign a score of 3. Sometimes the author may recognize two different views but only develop one of them. This would indicate the emergence of another perspective, which is given a score of 2. In other cases, the author may mention several characteristics of an issue but not elaborate any two of them to the point where they can be seen as distinct dimensions. This would be a list, and be assigned a score of 1.

In short, the scorer must feel certain that the author has clearly delineated two categories or rule structures in order to express the two (or more) perspectives or dimensions.
The score of 3 is given because of the evidence that differentiation exists, and is not related to the actual number of perspectives or dimensions that are differentiated. Including more than two alternatives does not increase the score.

INCREASED TOLERANCE FOR AMBIGUITY. A score of 3 denotes greater flexibility than any lower score. Increased tolerance for ambiguity or conflict is shown when the author considers a number of parallel or contradictory perspectives or dimensions. A different perspective is no longer automatically wrong, bad, or identified with a disliked out-group. Good–bad or right–wrong judgments no longer require taking the all-or-nothing stances characteristic of the scale value of 1. The author recognizes that two views may operate simultaneously and that reasonable persons might favor either side. There is a reaction against absolutism in general.

I see myself as a watcher, a listener who aspires to understand (probably too much so) all of what I see and hear. I'm a people person who also demands a lot of time alone. In my solitary times, I think about almost every aspect of everything. I'm argumentative but also possess a good sense of humor to rescue myself when I've become too much the devil's advocate. I'm not psychic so I can only hope and not know if I've sufficiently answered the question of who I am.

CONTENT FLAGS. All of the content flags characteristic of a score of 2 are also diagnostic of a score of 3. The same key words appear to signal both implicit and explicit differentiation. Additional content flags, specific to a score of 3, include alternatively, either–or, on the other hand, and meanwhile.

SCORE OF 4

General explanation

In the earlier levels, the major element determining a specific score was the presence or absence of differentiation. In the score of 4, we seek signs of the emergence of the second major scoring element, integration. That is, we begin to find indications of the ability to integrate different and sometimes conflicting alternatives. Conceptual integration is not clearly apparent at this level, however. Instead, the integration of alternatives is implicit.

A score of 4 must show two features. First, there must be a clear representation of alternatives. Second, there must be an implicit recognition of a dynamic relationship between or among them. The recognition of this relationship signifies the emergence of integration, although at this level it is expressed in a tentative and often uncertain manner. The clear description of the relationship is often withheld until further information is received.

In summary, there is only a suggestion that interaction exists between the alternatives; there is no overt statement specifying the nature of this interaction.
Scoring for conceptual/integrative complexity

Critical indicator

The author must indicate that multiple perspectives or dimensions exist, and also that they could interact.

Specific indicators

TENSION BETWEEN ALTERNATIVES. Occasionally, the manner in which alternatives are presented suggests that tension exists between or among them. It should be noted that the tension referred to here is not necessarily a negative factor, but is simply an indication that a dynamic relationship exists between the alternative perspectives or dimensions.

The recognition of tension may occur through a single clear-cut statement. For example, the author may state that resolution of a problem will be difficult because two groups hold different, somewhat contradictory views. This statement with respect to resolution implies that both groups are dependent on each other or must respect the other's standpoint, and will probably have to compromise — or, in other words, integrate their differing perspectives. In other paragraphs, tension between alternatives may not be stated so explicitly. A single statement that tension is present cannot always be found.

I have very treasured memories of Grandmother but for some strange reason I didn’t feel a strong sense of loss at this time. I have had some guilt feelings about this. The nearest I can come to my attitude is that I felt that it was time for Grandma to die.

INTEGRATION EXPRESSED AS A SUPERORDINATE STATEMENT. Sometimes a superordinate statement is given from which the two alternatives have been generated. It is usually the introductory statement in the paragraph. In this case, a broad statement encompasses the multiple perspectives or dimensions. This statement may also be presented as a single conclusion derived from the two (or more) alternatives.

I like to seek the help of the people around me. Sometimes I gain a lot of valuable information this way and sometimes it is more confusing. Even if I do become a little more confused at first, it is worth seeking advice. Information, like doubt, holds possibilities.

Score of 5

General explanation

A score of 5 indicates the explicit expression of integration. Thus far, our explanation of the scoring technique has focused on various ways of delineating levels and indicators of differentiation. The one exception to this
trend was the description of a 4, which may be viewed as the transition point between an expression solely defined by differentiation and one where evidence of integration appears. Whereas a score of 4 signifies the emergence of integration expressed in a tentative or uncertain manner, a score of 5 indicates that integration is clearly evident.

**Critical indicator**

The critical indicator of a score of 5 is that alternative perspectives or dimensions are not only held in focus simultaneously but also are viewed interactively. The author is not only able to see that multiple alternatives are all to some degree legitimate but is also able to delineate the relationship between them.

**Specific indicators**

**Mutual Influence and Interdependence.** Sometimes, two or more alternatives are shown to be in a dynamic relationship with one another, in which each perspective affects and is affected by the other. The author must clearly recognize the reciprocity of the relationship for the passage to be scored a 5.

I like to seek the advice of the people around me. In talking with people I not only gain access to their opinions and ideas but I am also allowed to reanalyze my doubts. With time, this fusion of my reanalysis with other's ideas can often lead to a new approach to my initial conflict. Often this type of interchange can also help my advisors to clarify their own opinions on some important issues.

A relationship in which one alternative affects the other without consequence to itself is a one-way relationship and cannot be scored as a 5.

**Synthesis.** The generation of a novel product is evidence of integration. This product may be explicitly related to the two alternatives in the paragraph, or the relationship may only be implied. The novel product may be expressed as an insight, a new policy, or the unexpected result of the interaction of the two dimensions.

I took such care of it that it lived and the leg grew well and as strong as ever; but by nursing it so long, it grew tame and fed upon the little green at my door, and would not go away. This was the first time that I entertained a thought of breeding up some tame creatures that I might have food when my powder and shot was all spent.

**Content Flags.** Content flags are not appropriate for integrative statements, because in most cases specific words or phrases can be incorporated in simple as well as complex thoughts. However, such terms as *interplay, interaction, interdependency, mutual(ity), compromise, equilibrium, balancing,* and *trade-offs* are compatible with the score of 5.
SCORE OF 6

General explanation

In general, the score of 6 involves a high-level interaction indicating that the author is working with multiple levels of schemata. The alternatives at this level are dynamic: They are expressed as plans, processes, or courses of action made up of several moving parts, and as such we may often refer to them as systems or networks. One of the indicators of a score of 6 is the specific explanation of both the "moving parts" within a system and also how those parts affect each other or the system.

At this level alternatives are readily accepted, compared or contrasted, and integrated so as to present at least one outcome. Global overviews or organizational principles (temporal, causal, ideological) are often presented. The emergence of this type of principle is the second main indicator of the score of 6.

Critical indicator

For a paragraph to be given a score of 6, the author must be working across several levels of schemata and at least one of the indicators noted previously must be explicitly delineated. Thus, there may be an explicitly presented global overview with only an implicit indication of the specific dynamics of the alternatives. Conversely, there may be explicitly stated details about the dynamic interaction between alternatives and only an implicit communication of the global overview.

Specific indicators

Comparison of outcomes. The author is aware of two alternative courses of action and is able to compare their outcomes with regard to long-term implications. In comparing alternatives, the author may favor one over the other, but each is reasonably considered. Alternatives and outcomes may be actual or hypothetical.

One form of self-expression is influenced by our interpersonal relationships and experiences. My relations with my parents and friends have made me value honesty and intimacy. Another child's upbringing may have made independence a central concern. Unfortunately some children's social environment fosters mistrust and fear of rejection. By adulthood, if not earlier, we have all created a style of expressing ourselves, each subtly different, because of our varying backgrounds, which alter the paths we follow through life.

Explanation of Score: In the first sentence the author expresses a global overview of factors influencing self-expression. Different circumstances leading to the creation of various styles of expression are then compared.
Multiple levels of interactive schemata are present: the types of upbringing; styles of expressing ourselves; and paths we follow through life.

**Systemic analysis.** Any case in which the author describes how an existing relationship, network, or system can be affected by changes in an internal or external variable may be scorably as a 6. The effect that the active variable has on the system is often discussed in terms of the accommodation that the system makes to it at various hierarchical levels.

As for myself, I do not fear death, nor do I look forward to it. There is no appropriate time for death; if one conceives life as a dialectic, one realizes that issues are never settled once and for all. When every item on my list is completed a new list of items is generated. Relationships are never fulfilled; the deeper a relationship becomes the more nurturance and care it generates. In fact I'm not exactly in agreement with the choice points of Erikson's last stage — integrity versus despair. While despair is certainly the negative outcome, I'm uncertain that integrity — or acceptance of one's life as "good" — is the desirable resolution. For me, death simply means that the eternal struggle has ended.

Explanation of Score: The author gives the specifics but no global statement in describing a conceptualization of the relationship between life and death. Life and death are seen as unified opposites, a dialectic. Within this system issues and relationships are seen as ever changing. New inputs generate new feelings. The author can see places in which this system is commensurate with Erikson's hierarchy of stages and places where the two systems may differ.

**Score of 7**

**General explanation**

The unique characteristic of a score of 7 is the presence of an overarching viewpoint pertaining to the nature (not merely the existence) of the relationship or connectedness between alternatives. In a score of 7, these alternatives are clearly delineated and are described in reasonable detail. How each alternative may be seen to be part of some overarching view, or how some overarching view encompasses these alternatives, is made evident.

**Critical indicators**

First, an overarching viewpoint is presented, which contains an explanation of the organizing principles (e.g., temporal, causal, theoretical) of the problem or concept.

Second, there is a discussion of the ways in which levels of the problem or concept interact and thus demonstrate the validity of the overarching viewpoint. The description of the ways in which levels of the system interact
Scoring for conceptual/integrative complexity

must be both specific and dynamic, demonstrating how each level is affected by the other.

Although these indicators are distinct, they are inextricably linked. The overarching view encompasses the components of a system, and in fact may have developed as a result of the author's simultaneous consideration of these levels or components.

Specific indicators

Comparison of outcomes. The author takes a global view of the events in the situation and relates these events to an organizing principle. At the same time, the specific nature or dynamics of at least one of the events is outlined in some detail. The possible outcomes of events are compared and related to this global view.

As is the case of the many movements led by our party over the last years and more, there are always shortcomings among great achievements. So there are always at least two ways to approach the resolution to these inherent shortcomings. The outstanding contradiction with which we are now faced in our work is the tension and strain in various quarters caused by disproportions. Due to the party's achievements both in development and investment, resources are finally available. Now we must concern ourselves with the intricacies of distribution. The development of unequal distribution has affected the social and working relationships between citified workers and their rural peasant counterparts. The rural workers are hesitant to maintain long work hours when they perceive that the citified workers benefit more than they do themselves. The citified workers believe that the rural life is far easier than their own and that the government farm subsidies are a waste of funds that could be better used in industrializing the cities. Further, within the cities themselves we even have disruption among the various strata there, between merchants and workers, between land-owners and renters. Likewise, the various strata among the peasants are at odds with one another. This is a political problem. The key to whether we can mobilize the broad masses to continue the great leap forward into the future that our party wishes to achieve is the extent to which we can ensure, by whatever means we now develop, the fair distribution of resources. If we are not able to establish an equitable system, and to convince the various strata among the population that this has been achieved, hostility and competition will continue to grow. Disproportionate distribution of resources is a problem which can be solved with a well-planned strategy, but hostility among the people is a problem which may change the entire face of our country.

Explanation of Score: The author takes a global view of the multiple controversies in this example, relating them all to the disproportionate distribution of resources. At the same time, the specific nature of the controversies is outlined (e.g., between urban and rural workers, among several city strata). Notice that it is not necessary for every part of the system to be delineated; for example, no specific statement is made concerning the friction that is developing among the peasant strata. The author also sees the distribution system as related to two organizing principles: although
equivocal distribution of resources is basically an economic problem, it will also have political ramifications. Two possible outcomes are presented, both dependent on the party’s ability to distribute resources fairly.

**Systemic Analysis.** In general, this type of highly integrative passage explores specific complex interactions within a complex system, using an overarching global view as a way of uniting these observations. The author begins by taking a global view of the problem and then provides examples for the particular interpretation. The effect of one action on other levels throughout the system is then clearly explained. The general and specific consequences of this "ripple effect" are delineated.

Social relationships permeate every aspect of our lives: our family and friends, our culture, and our global community. The family is the primary source of the development of our social bonds. This extends to new and different people as we make and remake friendships throughout life. The unique experiences that we take away from our varied relationships influence our form of self-expression which is, itself, a component of our social interactions with family and friends and with our extended community.

Explanation of Score: The author makes clear reference to multiple, specific, embedded levels of "our lives" within the context of an overarching global network of social relationships. The varied relationships we have with others in these family, friendship, cultural, and global community spheres have an impact on our "self-expression," which, as a consequence, influences the interactions we have in these social spheres. This dynamic, rippling effect is the hallmark of systemic analysis in the score of 7.