CODE THESE COMPLEX HYPOTHESES. THEY REFER TO PICTURE 3, "I AND MY VILLAGE."

HA = Hypothesis-Action HT = Hypothesis-Thought

"He's going home from working in the field . . . you can see a scythe over his shoulder, and he has on his working boots. . . ."

"The animal is dreaming about when she will be milked: the little picture of the woman milking the small animal shows the dream. . . ."

"The man is going to feed the animal . . . he's holding a tree branch in his hand, which has fruit and seeds on it. . . ."

_____

(TOTALS)

CHECK YOUR CODING BY TURNING TO THE NEXT PAGE.

2HA(2) 2LO — "He's going home (HA) from working (LO) in the field . . . you can see a scythe (1) LO over his shoulder, and he has on his working (1) LO boots. . . ."

(The viewer names the objects which support his inference about the man's actions; hence, complexity points are given for scythe and boots and the LO's are double coded.)

HT(1),LO HA — "The animal is dreaming about (HT) when she will be milked; the little (1) LO picture of the woman (HA) milking the small animal shows the dream. . . .'"

(The animal's dream is classified as thought, HT. The "picture . . . shows the dream" is the evidence for the inference that the animal is dreaming; hence, picture is coded as LO and as a complexity point for HT. The phrase "of the woman . . . animal" is an inference about what actions take place in the little picture, and is therefore classed as an HA.)

HT(3),3LO HA — "The man is going to feed (HT) the animal . . . he's holding (HA) a tree (1) LO branch in his hand which has fruit (1) LO and seeds (1) LO on it. . . ."

(This is a little complicated. The man's intention to feed the animal is classed HT; the action of holding the tree branch is classed HA, but the tree branch, and fruit and seeds are the pictorial evidence which supports the hypothesis that the man intends to feed the animal. Therefore, we give three complexity points to HT, and double code the three LO's. Notice that, although the "hand" is mentioned, it is within the hypothesis about action, so is not coded as an LO.)

4HA(2)
2HT(4)
6LO (TOTALS)

IS EVERYTHING CLEAR NOW? LET'S GO ON TO MORE HYPOTHESES.

(HS) Hypothesis-sensation. The HS coding is used for hypotheses relating to physical sensations or states.

HS, HA {"He's cold (HS) because he's wearing a heavy coat. . . ." (HA)}

HA, HS {"She's resting on the bench (HA) because she's tired. . . ." (HS)}

HS, HA {"I think he's very tired: (HS) he's walked a long way . . ." (HA)}

(Note: Subject matter context is heavily relied upon in making the hypotheses. No attempt is made to see sensations or states represented as being symbolic of ideas or orientations toward life.)

(HNO) Hypothesis-nature of object. The HNO coding is used for hypotheses which advance an explanation of what an object might be, or what a person's role might be.

> "It looks like a man with a wooden head . . . it might be a stone, or it could be a bag . . . it might be a dummy . . . a scarecrow . . . a puppet . . . a monster . . . a preacher . . . the leader of the group . . . the father . . . mother . . . a magician . . . a magic box . . . a ghost . . . his wife . . . his daughter. . . ."

An HNO classification supersedes an LO classification; that is, any LO mentioned in a simple hypothesis is not coded as an LO, but as a complexity point related to the major classification.

(HC) Hypothesis-context. Hypotheses which refer to temporal, cultural, situational, or historical contexts within which the depicted subject matter could be taking place, or could have taken place:

> "It's long ago . . . in England . . . it's winter . . . a sunny day . . . it's a movie . . . like in the story 'Robin-hood' . . . a concert . . . a holiday celebration . . . the storm is coming up . . . there was an earthquake . . . it's going to rain . . . it's going to snow. . . ."

Confusion between LC and HC. The code is LC when it is obvious from the picture what the context is: "in the city, at the beach, or in a park." The code is HC when an inference about the specific location or

nature of environment is made from the pictorial evidence: "in Boston . . . Chicago . . . it's very cold . . . or it's going to snow."

If you can see enough pictorial evidence to warrant classifying a remark as a simple description of the context, then code it as LC. But if there are several alternatives which are easy to consider in light of what you see in the painting, then assume the remark is an hypothesis, and code it as HC.

FIND THE HS, HNO, AND HC HYPOTHESES. FOR OTHER TYPES OF HYPOTHESES OR CUE ATTENDS, CONSULT TABLE 1. THE STATEMENTS ARE ABOUT PICTURE 3, "I AND MY VILLAGE."

HA = Hypothesis-Action HT = Hypothesis-Thought

HNO = Hypothesis-Nature of Object HS = Hypothesis-Sensation

HC = Hypothesis Context

"The man with the green face is probably a priest: notice the cross around his neck. . . ."

"He might be the animal's master . . . or he could be a farmer. . . ."

"The tree looks as if it's magical: notice the way it appears to glow or twinkle . . . it's not very naturalistic looking. . . ."

"It appears to be a dream sequence: I think it's a very quiet little village in Europe, a long time ago . . . the figure and houses in the upper left are upside down, and the colors used on the large man and animal are unusual . . . the size relationships are unnatural . . . like a dream. . . ."

"The small animal which is being milked looks uncomfortable . . . one front foot is tied and she looks like she's tugging to get loose. . . ."

"The small man with the scythe is stooped a bit . . . as if he's weary from his labors. . . ."

(TOTALS)

THE CORRECT CODING FOR THESE STATEMENTS IS ON THE NEXT PAGE.

HNO(1) 2LO

"The man with the green face is probably a priest: notice the cross around his neck. . . ."

(The hypothesis is about the man's social role; hence, it is classified HNO. Only one LO is evidence for this hypothesis; the second LO is coded as a simple LO.)

2HNO

"He might be the animal's master . . . or he could be a farmer. . . ."

(Here are two hypotheses about social role; hence, HNO.)

HNO(3) 2SQ ST

"The tree looks as if it's magical: notice the way it appears to glow or twinkle . . . it's not very naturalistic looking. . . ."

(The hypothesis is about the nature of the object, tree; hence, HNO. Three pictorial references are mentioned, the last being an observation about the style in which the tree is rendered.)

HNO(5) 3HC 4LO 2C VS

"It appears to be a dream sequence: I think it's a very quiet little village in Europe, a long time ago . . . the figure and houses in the upper left are upside down, and the colors used in the large man and animal are unusual . . . the size relationships are unnatural . . . like in a dream. . . ."

(The first hypothesis is about the nature of the situation represented, followed by three hypotheses about context. Pictorial evidence cited to support the HNO is then named: two LO's which are upside down; two unusual colors; and one Unique Schemata. Notice that the color is what is unusual in the second instance, therefore two complexity points are given for colors used on the man and the animal. The two LO categories mentioned in the supporting statement are also recorded.)

2HA HS(1),LO

"The small animal which is being milked looks uncomfortable . . . one front foot is tied and she looks like she's tugging to get loose. . . ."

(Evidence for the HS hypothesis is coded as a complexity point and double coded for the category mentioned: LO. Note that the hypothesis which describes the animal is recorded: HA. Another HA hypothesis, which is given as a supporting one for the HS, is recorded as an independent HA, since we have no coding system for registering supporting hypotheses in relation to the major hypothesis.)

HS(1),SH 2LO "The small man (LO) with the scythe (LO) is stooped (1) SH a bit . . ./as if he's weary from (HS) his labors. . . ."

(The man's shape is described and given as evidence for the HS.)

---

5 HND (9)
3 HC
2 HA
2 HS (2)
9 LO
2 SQ
ST
2 C
US
SH

(TOTALS)

GO ON TO THE NEXT PAGE FOR NEW TYPES OF HYPOTHESES.

Affective reference. This category classifies statements which refer to emotions ascribed to characters portrayed, or to the emotions evoked in the viewer. Under this heading are two divisions: affect and subjective feeling.

(HAF) Hypothesis-affect. The HAF coding is used for hypotheses which ascribe emotions to individuals represented. Usually--though not always--there is some reference to situations or actions portrayed in the work.

HAF, HC "He feels frightened/because there is a storm coming up and. . . ."

HAF, HA "He is sad/because one of his doves has escaped from the cage. . . ."

HAF, HT "He's happy/because the man is telling him a funny story. . . ."

3 HAF "He's melancholy . . . very gay . . . feeling good. . . ."

(HSF) Hypothesis-subjective feeling. The HSF coding is used for hypotheses which refer to emotions evoked in the viewer by the subject matter or by expressive attributes of the work.

HSF "I think this picture makes you feel scared because. . . ."

HSF "This painting is supposed to make you feel happy because. . . ."

HSF "This painting is supposed to make you appreciate. . . ."

4 HSF "This painting makes me feel . . ./uneasy . . ./scared . . ./joyful. . . ."

HSF "To me, this painting is very joyful. . . ."

CODE THESE STATEMENTS, REFERRING TO "I AND MY VILLAGE." THESE ARE CUE ATTENDS (CONSULT TABLE 1) AND VARIOUS TYPES OF HYPOTHESES MIXED WITH THE HSF AND HAF HYPOTHESES.

HA = Hypothesis-Action	HS = Hypothesis-Sensation
HNO = Hypothesis-Nature of Object	HC = Hypothesis-Context
HSF = Hypothesis-Subjective Feeling	HAF = Hypothesis-Affect

"The face peering out of the church door is strange: she's sad-faced, as if she has gone to the church to grieve. . . ."

"The clouds look very threatening, as if it might storm . . . perhaps the man with the scythe is afraid of the storm, so he's going in. . . ."

"The picture gives me an eerie feeling: perhaps it's the brooding quality of the upper part . . . the clouds are so turbulent-looking . . . it's a strange mixture of sadness and hope . . . the left side of the sky is lighter, happier colors . . . I guess it's supposed to make you feel both the melancholy and joyous side of life. . . ."

(TOTALS)

CORRECT CODING IS ON THE NEXT PAGE.

HAF(1) EQ 2HA US

"The face peering out of the church door is strange: / she's sad-faced, / as if she has gone to the church / to grieve. . . ."

(This is a little difficult. The first cue attend simply identifies the US of the face as "strange." The next cue indicates that the viewer has differentiated more specifically what is strange about the face: it is an expressive quality of sadness. From this second cue attend, the viewer goes on to make two inferences about actions and affect. The second cue attend is the one which is coded as a complexity point for HAF, since it is most logical that it is this cue attend which led to the inference.)

HC(1), EQ LO HAF, HA

"The clouds look very threatening, / as if it might storm . . . / perhaps the man with the scythe is afraid of the storm, / so he's going in. . . ."

(The cue attend which leads to the inference about the storm is the threatening quality of the clouds; hence, the EQ is given as a complexity point for the HC. The HAF makes an inference about the man's feelings; it is followed by an hypothesis about his actions.)

HSF(2) 2EQ 2LO PQ C HSF(1) EQ

"The picture gives me an eerie feeling: / perhaps it's the brooding quality of the upper part . . . / the clouds are so turbulent-looking . . . / it's a strange mixture of sadness and hope . . . / the left side of the sky is lighter, / happier colors . . . / I guess it's supposed to make you feel both the melancholy and joyous side of life. . . ."

(The first HSF is supported by descriptions of the EQ of the upper part of the painting and the EQ of the clouds. It is followed by a descriptive statement about the total quality of the painting. Then another cue attend follows about the EQ of the color of the sky; this EQ supports the second HSF. LO and C points, which are cue attends, but are not direct pictorial evidence for the hypotheses, are coded as simple points.)

2HAF(1) 5EQ
3HA US
HC(1) 3LO
3HSF(3) PQ
C

(TOTALS)

NOW THAT YOU ARE VERY SKILLFUL IN CODING COMPLEX HYPOTHESES, GO ON TO THE NEXT GROUP.

Symbolic reference. The viewer indicates that what is presented specifically functions as a metaphor for a larger abstraction. Statements reflect an awareness that the presentation is an expression of a philosophical framework, or the communication of a universal human condition. The work, or parts of the work, are seen as symbolizing a universal or generic concept such as justice, man's inhumanity to man, or the drama of birth or death. Under this heading are three divisions: symbolic aspect, thematic, and fantasy.

(HSA) Hypothesis--symbolic aspect. The HSA coding is used for hypotheses relating to the significance of particular aspects or parts of the painting.

HSA "The birds stand for love . . . they are looking at each other,
HA, HSA to symbolize friendship between man and beast . . . the bird-
HSA cage means that the man is empty . . . it shows emptiness, as if he felt emptiness. . . ."

(HTH) Hypothesis--thematic. The HTH coding is used for hypotheses which identify a theme or major idea expressed in the painting. No particular aspects of the painting need be mentioned; an interpretation of the painting as a whole is made. However, in some complex hypotheses, either visual and formal properties, or subject matter components may be cited as supporting evidence for the hypothesis regarding the theme.

HTH "stands for the tragedy of human existence . . . the love of a
2 HTH mother for her child . . . the horrors of war . . . symbolizes
HTH life and growing things . . . is an expression of the fact that
HTH man's life is composed of memories and dreams as well as his everyday activities and thoughts. . . ."

In the following response, notice that HTH supersedes any HA or HT hypotheses. "That he wants to be a violinist" is considered as part of the thematic hypotheses, describing the content of the dream. The pictorial references, which if considered alone would be classified as HA, are coded as complexity points, with the LO's double coded. HTH also supersedes Hypothesis-Sensation, Nature of Object, and Context.

HTH(3) 3 LO

"I think it's just somebody's dream, that he wants to be a violinist . . ./because you don't see people (1) LO flying/or dogs (1) LO climbing on the roof LO . . ./and he's very big . . ./and there's another person (1) LO doing something with a violin LO . . . that's unusual. . . ."

(HF) Hypothesis-fantasy. The HF coding is used for hypotheses which reflec the fanciful invention of unique or novel concepts triggered by the depicted matter, but only remotely related to it. Such hypotheses exemplify a creatively inventive imagination.

HF "He's flying up in the air because HF he ate too much of that new 'PUFFY-LITE' cereal for breakfast this morning . . .)(he really

HF doesn't mind flying HF around, though: he escapes having to work in the office . . .)(maybe he'll change his HF occupation; become

HF an "overseer" for the vice squad . . .)(or maybe he'll get a job

2 HF with the HF ballet . . ./he would become famous HF for his mighty leaps and jumps!"

HF and HSA are frequently associated with or used as supporting hypotheses for HTH. They are coded independently associated with or used as supporting hypotheses for HTH. They are coded independently in their own category.

"This represents the tragedy of human existence: the distorted face of the woman symbolizes man's grief and rage at the evil of life . . . the figure beating the others stands for the inhuman use of authority to force others to conform to the will of a few . . . this might even represent what could happen in a world gone mad with power and greed after technology has destroyed the human qualities we now know exist. . . ."

THESE STATEMENTS REFER TO PICTURE 3, "I AND MY VILLAGE." CODE THE HYPOTHESES YOU FIND.

HSF = Hypothesis-Subjective Feeling
HSA = Hypothesis-Symbolic Aspects
HTH = Hypothesis-Thematic
HAF = Hypothesis-Affect
HF = Hypothesis-Fantasy
HS = Hypothesis-Sensation

"I think this picture is the representation of Chagall's boyhood memories. . . ."

"I think the tree he's holding is the Tr of Life. . . ."

"This is the dream of simple village life, where life is calm and serene . . . and man is filled with kindness. . . ."

"I think this is a picture of what can happen when a small travelling circus gets stranded in a country village . . . the clown has just picked a magic plant from the forest and is about to feed it to the animal . . . the animal knows what's ahead; he can see into the man's eyes and read his thoughts; he's going to be changed into another animal to give milk to help feed the troop! One poor former acrobat has been put to work as a farmhand, while another is hanging by her toes, just to keep in practice. . . ."

"The pink shape is the path of life, which leads to exciting adventures."

(TOTALS)

CHECK YOUR CODING BY REFERRING TO THE NEXT PAGE.

HTH "I think this picture is the representation of Chagall's boyhood memories. . . ."

HSA "I think the tree he's holding is the tree of life. . . ."

(The first hypothesis refers to the idea conveyed by the whole picture: HTH; the second refers to the symbolism of one element in the painting: HSA.)

HTH HAF "This is the dream of simple village life, where life is calm and serene . . . and man is filled with kindness. . . ."

(The viewer states the idea expressed by the painting, with some elaboration, but without citing pictorial evidence. One could assume that the inferences are made because of observations of the depicted figure's actions.)

HTH "I think this is a picture of what can happen when a small travelling circus gets stranded in a country village . . . the

HF clown has just picke[illegible] plant from the forest and is about

to feed it to the animal . . . the animal knows what's ahead;

HF he can see into the man's eyes and read his thoughts; he's going

2 HF to be changed into another animal to give milk to help feed the troop! One poor former acrobat has been put to work as a farmhand,

HF while another is hanging by her toes, just to keep in practice. . . ."

(The first statement indicates the major idea conveyed in the painting: HTH. The succeeding statements are fantasies related to the theme.)

HSA "The pink shape is the path of life, which leads to exciting adventures."

---

2 HSA
3 HTH (TOTALS)
5 HF

ON THE FOLLOWING PAGE ARE MORE HYPOTHESES WHICH MAY BE CLASSIFIED AS SYMBOLIC REFERENCES.

CODE THESE STATEMENTS ABOUT "I AND MY VILLAGE." SOME OF THE HYPOTHESES ARE COMPLEX, WHICH MEANS THAT YOU MUST DOUBLE CODE PARTS OF THE HYPOTHESES AS CUE ATTENDS. CONSULT TABLE 1 AS NEEDED.

HSA = Hypothesis-Symbolic Aspect HF = Hypothesis-Fantasy

HTH = Hypothesis-Theme HC = Hypothesis-Context

"the way the man and animal are looking at each other symbolizes the mutual trust and friendship between man and beast . . . the circle which forms part of the man's face and part of that of the beast also symbolizes this mutualness of concern . . . a 'circle of friendship' which includes all living creatures. . . ."

"this is an expression of a state of mind . . . imagination and fantasy predominate . . . one of those 'secret places' where man can go in reverie or daydream or memory . . . a place of gentle domesticity; tranquil, bucolic, and full of love between all who dwell therein. . . ."

"the magic tree in his hand functions to transport him, and the animal who is his kindly companion, on a journey within: a journey to a fabulous land whose 'little people' represent various aspects of human nature: the energy and industry represented by the man with the scythe and the woman milking the animal . . . the religious aspect represented by the woman's face in the church and the cross on the man . . . the upside-down woman and houses may represent the ability of man to imagine states of being or sensations. . . ."

(TOTALS)

CHECK YOUR CODING ON THE FOLLOWING PAGE.

HSA "the way the man and animal are looking at each other symbolizes (HSA)
the mutual trust and friendship between man and beast . . .)(the

HSA circle which forms part of the man's face and part of that of the
beast also symbolizes this mutualness of concern: a 'circle of (HSA)
friendship' which includes all living creatures. . . .")

(Two hypotheses infer a symbolic function of two configurations in the painting. The phrase following the colon is not coded as a separate HSA, since it is an elaboration of the metaphor, not a description of a new symbol.)

HTH "this is an expression of a state of mind . . . imagination and (HTH)
fantasy predominate . . .)(one of those 'secret places' where (HSA)

HSA man can go in reverie or daydream or memory . . .)(a place of

2HC gentle domesticity: /tranquil,/bucolic,/and full of love between (HC) (EQ) (EQ) (HC)
2EQ all who dwell therein. . . .")

(The first hypothesis is about an abstraction, "state of mind"; it is classified HTH. The second hypothesis deals with the painting as a total art symbol of one secret place (state of mind). The third hypothesis makes an inference about secret place (HC), and mentions some expressive qualities which are associated with this place of gentle domesticity. The fourth hypothesis (HC) makes a slightly different inference about the kind of place as one which is characterized by exchange of love between all its inhabitants.)

HF "the magic tree in his hand functions to transport him, and the (HF)
animal who is his kindly companion on a journey within:)(a

journey to the fabulous land whose 'little people' represent
HSA(7) various aspects of human nature:/ the energy and industry repre- (HSA)
//LO sented by the man (1)LO with the scythe LO and the woman (1)LO milking the
animal LO . . ./the religious aspect represented by the woman's (1)LO
face in the church LO and the cross (1)LO on the man LO . . ./the upside-down

(1) LO (2) LO
woman and houses may represent the ability of man to imagine states of being or sensations. . . .")

(The first hypothesis is a fantasy in which the tree is seen as a magic instrument. The second hypothesis begins with the statement that the 'little people' represent various aspects of human nature, and the phrases following elaborate various aspects, citing LO's as exemplars of those aspects. The aspects themselves are not coded as hypotheses, as they are elaborations of the phrase "various aspects.")

---

4 HSA (7)
HTH
2 HC
HF
2 EQ
11 LO
(TOTALS)

MOVE ON TO THE NEXT PAGE FOR FURTHER EXPLANATIONS AND EXERCISES.

VIII. Contextual Attributes

In this category are inferential statements that indicate awareness of the art form as a reflection of cultural influences. The work is seen as a product or exemplar of a particular historical evolution, of a particular school and artistic trend, or of a particular artist.

(HAR) Hypothesis-artist. The HAR coding is used for hypotheses about the intent of the artist, the artist as a personality, or the artist's life as reflected in the work.

> "He must have felt very sad when he painted this. . . ."
>
> "He wants to show the influence of religion on the life of the individual. . . ."
>
> "He was mad . . . unhappy . . . crazy . . . a painstaking craftsman . . . a genius . . . a romantic. . . ."

ON THE NEXT PAGE ARE SOME CUES AND HYPOTHESES FOR YOU TO CLASSIFY. YOU MAY HAVE TO REFER TO THE CUE-ATTENDANCE CATEGORIES TO REFRESH YOUR MEMORY.

CODE THESE STATEMENTS ABOUT "I AND MY VILLAGE." THERE ARE CUE ATTENDS AS WELL AS HYPOTHESES. CONSULT TABLE 1 AS NEEDED.

HA = Hypothesis-Action

HAF = Hypothesis-Affect

HT = Hypothesis-Thought

HSF = Hypothesis-Subjective Feeling

HS = Hypothesis-Sensation

HSA = Hypothesis-Symbolic Aspect

HNO = Hypothesis-Nature of Object

HTH = Hypothesis-Thematic

HC = Hypothesis-Context

HF = Hypothesis-Fantasy

HAR = Hypothesis-Artist

"This is a painting about a folk culture. . . ."

"It's apparent to me that the artist felt very nostalgic when he painted this . . . he wanted to convey a folk-culture orientation. . . ."

"The design is quite complex: using many bright colors and a variety of shapes. . . ."

"This conveys a very happy, fanciful mood; the artist must have been feeling rather joyful when he conceived this idea . . . the colors used are mostly 'happy' ones: reds, yellows, clear greens, and blues . . . altogether a delightful record of village life . . . even the way he painted it--the little dot-like brush strokes at the upper left, and the dots of color around the trees--conveys vitality and sparkle. . . ."

CHECK YOUR CODING ON THE NEXT PAGE.

HTH { "This is a painting about a folk culture. . . ."

(This statement relates to the theme of the painting; hence, HTH.)

HAR { "It's apparent to me that the artist felt very nostalgic when
HAR { he painted this . . .) (he wanted to convey a folk-culture orien-
HAR { tation . . .) (perhaps represent a memory of his childhood. . . ."

(One statement is a hypothesis about the artist's mood; the next two are about his intent; therefore, all are classified HAR.)

PO(2) C,SH { "The design is quite complex; / using many bright colors / and a variety of shapes. . . .")

(The first part of the statement is an observation about composition; therefore, it is classified PO; the second part consists of two cue attends which elaborate the PO.)

PQ HAR { "This conveys a very happy, fanciful mood; / the artist must have been feeling rather joyful when he conceived this idea . . .)

C(5) EQ(5) { the colors used are mostly 'happy' ones: / reds, / yellows, / clear greens, / and blues . . .) (altogether a delightful record of village

HTH T(2) 2SH C 2EQ LO { life . . . / even the way he painted it - / the little dot-like brush strokes at the upper left, / and the dots of color around the tree-- conveys vitality and sparkle. . . .")

---

2 HTH		PQ	3 EQ(5)
4 HAR	(TOTALS)	3C(5)	T(2)
PO(2)		3SH	LO

(This is a difficult passage to code, so if you did correctly on the first try, you are a well-trained judge! The first two codings seem obvious. However, the next section needs explanation. The marginal totals show that the named colors are coded as complexity points for two categories of reference: Color and Expressive Quality. We interpret these color words as "class" mentions for both "colors" and "happy."

The HTH classification seems obvious. The T classification is clear enough, but the reason for classifying "dot like" as shape may not be. A dot has a distinctive shape as a dot rather than as a line or some other brush stroke; therefore, the shape classification. These references to shape are pictorial evidence for the statement about technique; therefore, they are coded as complexity points C and LO, which are used in the description. The nouns "vitality" and "sparkle" indicate qualities perceived by the viewer as being the technique. They are not pictorial evidence for technique, but are associations evoked by the technique and are coded independently of the T classification.)

(HST) Hypothesis--style. The HST coding is used for inferences that classify the work as exemplifying a particular artist, school, or period. Hypothetical statements about style differ from descriptive statements about style. Descriptive statements identify salient characteristics of rendition or technique. Hypothetical statements indicate that the viewer has inferred a stylistic classification from the salient features of the work.

> (style of a particular artist) "the brush strokes make me think it's a Van Gogh . . . the quality of line marks it as a Picasso . . . I can tell from the color it's a Cezanne. . . ."
>
> (style of a particular school) "an example of cubism . . . expressionism . . . surrealism. . . ."
>
> (style of a particular period) "it's before they painted in hard edge style . . . forerunner of the expressionists . . . after the Pop Art movement began. . . ."

CODE THE FOLLOWING STATEMENTS, REFERRING TO PICTURE 3, "I AND MY VILLAGE."

HA = Hypothesis-Action	HTH = Hypothesis-Thematic
HT = Hypothesis-Thought	HST = Hypothesis-Style
HAF = Hypothesis-Affect	HSA = Hypothesis-Symbolic Aspect

"This is a very active painting, with lots of diagonal lines in it . . . the suspended figure and the inverted houses, as well as the irrational size relationships are typical of Surrealism . . . it must be a Chagall . . . one of his earlier works, since he presents the Russian village life theme rather than the romantic love theme he used so frequently following his wife's death. . . ."

"A very expressive painting, painted with much attention to the exciting relationships of shapes to each other. . . ."

_____

(TOTALS)

CHECK YOUR CODING ON THE NEXT PAGE.

PQ, L "This is a very active painting, / with lots of diagonal lines in it. . . ."

(The PQ classification is made in terms of a kinesthetic concept of motion, with a mention of line elements.)

HST(3) 2 LO US "The suspended figure / and the inverted houses, / as well as the irrational size relationships / are typical of Surrealism . . .

2 HST it must be a Chagall . . . one of his earlier works, since he

HTH presents the Russian village life theme, rather than the romantic

HTH love theme he used so frequently following his wife's death. . . ."

(The hypothesis about surrealistic style is supported by pictorial evidence ("figure," "houses"). Two more HST's follow: one about the artist, and one about the chronology of the work. Two hypotheses about theme follow.)

PQ T, SH "A very expressive painting, / painted with much attention to the exciting relationships / of shapes to each other. . . ."

(The pervasive quality of the painting is noted. Next comes a statement which identifies the technique used.)

---

3 HST(3)
2 HTH
2 PQ
L
2 LO
US
T
SH
(TOTALS)

YOU HAVE NOW LEARNED ALL THE CATEGORIES FOR HYPOTHESIS GENERATION. GO ON TO THE FINAL GROUP OF CATEGORIES, WHICH CLASSIFY EVALUATIVE-JUDGMENTAL RESPONSES.

EVALUATIVE-JUDGMENTAL CATEGORIES

IX. Affective, Objective Responses

The kinds of responses in this category are predicated upon (a) the types and number of cues attended to by the viewer, (b) the kinds of inferences he makes from the particular combination of cues he is sensitive to, and (c) his inner store of conceptions and attitudes. They may be statements of preference, expressions of like or dislike, or assignments of value to the work.

(AJN) Affective judgment, not supported. The AJN coding is used for judging a work in terms of the response it evokes from the viewer. There is no attempt to support the like or dislike expressed in terms of any feature of the work, or in terms of any criteria of excellence.

"I like it . . . I can't stand it . . . it disgusts me. . . ."

(AJS) Affective judgment, supported. The AJS coding is used for responses which describe the viewer's personal reaction to the painting--with reasons for his like or dislike based on what he sees in the painting.

AJS (1) C, EQ — "I like this (AJS) painting, / because I think the (1) C warm colors used (EQ) give a radiance which is pleasing. . . ."

AJS (1) LC, EQ HSF — "I like this (AJS) / because the (LC) scene shown is a (1) EQ happy one, / which (HSF) makes me feel good. . . ."

CODE THESE JUDGMENTS. THEY ARE EVALUATIONS OF PICTURE 3, "I AND MY VILLAGE." CONSULT TABLE 1 TO CODE OTHER CATEGORIES YOU FIND.

AJN = Affective Judgment, Not Supported AJS = Affective Judgment, Supported

"I really respond to this painting: because the colors are exciting, their arrangement is dynamic--notice the sweep of the pink area across the canvas--the subject matter is charming . . . country village folk, going about their daily business with calm and joy. . . ."

"I don't get this painting . . . lots of different strange shapes and colors . . . all mixed up . . . ugh!"

"I think this is great! . . . I really like it!"

"I think this is a nice painting: I like gay colors and round shapes. . . ."

"I can't say I like this. . . ."

(TOTALS)

CHECK YOUR CODING ON THE NEXT PAGE.

AJS(5) 2C, LO 4EQ PO
AJS
"I really respond to this painting: because the C colors are (1) EQ exciting, / their PC arrangement is (1) EQ dynamic--/ notice the EQ sweep of the C SH pink area across the canvas--/ the (1) LO subject matter is (1) EQ charming

HTH
HTH . . . country village folk, going about their daily business with calm and joy. . . ."

(AJS is supported by mention of exciting colors, by the dynamic arrangement of colors, and by the mention of the charming subject matter. The sweep of the pink area, while describing an expressive quality, is an elaboration of the idea of dynamic arrangement. Synonymous with the mention of the subject matter is an hypothesis about the theme of the painting.)

AJS(3) SH, C, PQ AJN
AJS
"I don't get this painting . . ./ lots of different strange (1) SH shapes/ and (1) C colors . . ./ all (1) PQ mixed up . . ./ AJN ugh!"

(AJS is supported by mention of colors and sizes, as well as by a PQ. "Ugh!" expresses a strong but unsupported affective response and is coded AJN.)

2 AJN
AJN
"I think this is great! . . ./ AJN I really like it!"

(Two AJN, not supported by citing any evidence.)

AJS(2) EQ, C, SH
AJS
"I think this is a nice painting;/ I like (1) EQ gay/ C colors/ and (1) SH round shapes. . . ."

(The AJS is supported by mention of gay colors and shapes.)

AJN
AJN
"I can't say I really like this. . . ."

(This is merely an expression of dislike with nothing to support it; hence, AJN.)

---

3 AJS(10)
4 AJN
HTH
4C
LO
5 EQ
PO
2 SH
PQ
(TOTALS)

(OEN) Objective evaluation, not supported. The OEN coding is used for statements that evaluate the quality of the painting as an art object, but that are not supported by explicit reference to particular features of the work, or by reference to criteria for judgment of excellence.

"This is a good example of surrealism. . . ."

"This is an excellent painting . . . this is a poor painting . . . this looks like a fake reproduction . . . this doesn't look like anything at all. . . ."

(OES) Objective evaluation, supported. The OES coding is used for a qualified response with stated reasons for valuing the work which make the judgment subject to public corroboration or discussion. Justification of value is made on the basis of explicitly stated criteria.

One criterion, that of internal consistency, poses the question, How coherent is the work in its expression?

If a viewer considers this criterion, he looks at the execution of the work in relation to its theme. The consistency of the expressive qualities and formal elements are evaluated as they contribute to the total work. The relationships between elements and qualities which make for coherence are described and used as justification for the judgment rendered. Below is a coded example.

OES(3) / 2PO(3) 2C, SH / PO(2) C, SH HTH

"This is an excellent painting (OES) because the artist has unified (1) PO the work through the use of warm colors (1) C repeated, but he has varied (1) PO the colors (1) C and shapes (1) SH enough to avoid monotony. (The shapes (1) SH and colors (1) C are related in close harmony (1) PO so as to be consistent with the theme (HTH) of convivial joy suggested by the subject matter: the dancers amusing themselves at a fete.)

PQ(2) SQ(3) 3LO C

The textural/qualities of the foliage, as well as those of the clothing and skin of the people contribute to the feeling of pulsing life conveyed by the intense hues. . . ."

(In this complex response, the classifications are arranged hierarchically, as follows: The OES is supported by three references to PO: repetition, variation, and close harmony; which are in turn supported by references to color and shape. Hence, we have OES with three PO complexity points and each PO has complexity points for color and/or shape. Next comes an HTH; then a PQ statement, "feeling of pulsing life," which is supported by references to SQ and C, "intense hues." The SQ is in turn supported by references to three LO's: foliage, clothing, and skin.

Another criterion, that of external consistency, poses the question, How good an exemplar of a particular kind of painting is this one? If a viewer considers this criterion, he compares the work to rules of composition, and standards of excellence which are deemed appropriate for model members of the class of paintings to which it belongs. Below is a coded example.)

OES(2) 2 H/C

"This is an excellent example of abstract expressionism,/since its paint and brush techniques record the work's genesis,/and suggest the emotional state of the artist while producing the work.)

HSA SQ(3) SH,2C PO

(The tactile sensations which serve as icons for the qualities of exuberance and strength in human life/are strongly stated in major areas/of red/and yellow which/dominate the composition.)

PO(1),EQ L,C,SH HSA

(Tensions created by the linear elements--which act as a matrix to hold the color/areas/together--/suggest the tensions of the human in action. . . ."

(The OES is supported by two H/C references: "record of the work's genesis," and "suggest the emotional state," and one SQ is the subject of an HSA, but it also is exemplified by the red and yellow so two complexity points for SQ in terms of C are given. The PO, dominance, is exemplified by a reference to major areas, hence the complexity point is given for the shape category. Another PO in terms of linear elements is described, with other references to "tensions" and color and

shape. "Tensions," an EQ, also functions as the subject of the HSA, but is only coded once, as the EQ of the linear elements. HSA subsumes the EQ classification.)

ON THE NEXT PAGE ARE EXAMPLES OF TWO EVALUATIONS. YOU WILL HAVE TO READ VERY CAREFULLY AND THINK ABOUT HIERARCHICAL ARRANGEMENTS OF CUES WITHIN HYPOTHESES TO CODE THEM. GOOD LUCK!

CODE THE FOLLOWING EVALUATIONS. THEY REFER TO "I AND MY VILLAGE." THERE ARE SOME HYPOTHESES AND CUES USED TO SUPPORT THE JUDGMENTS. READ CAREFULLY. CODE ALL EVALUATIONS, HYPOTHESES, AND CUES. CONSULT TABLE 1.

OEN = Objective Evaluation, Not Supported

OES = Objective Evaluation, Supported

"I think this is one of Chagall's better attempts at fantasy. . . ."

"This is an excellent example of surrealism; it has many characteristics of surrealism, but is a distinctive personal expression by Chagall. The defiance of gravity by figures and houses lends a surrealistic quality to the work, as do the unnatural colors used on the man's face and the animal's neck . . . the 'illogical' size relationships between the figures is another characteristic of Chagall, but in the tradition of surrealism, which breaks all logical rules of placement and juxtaposition of subject matter in an attempt to convey the idea that these rules are in themselves unreal . . . that they are merely man-made devices or conventions which define a certain type of 'reality' . . . the symbols of the man and animal are puzzling and unusual. . . ."

(TOTALS)

CHECK YOUR CODING BY TURNING TO THE NEXT PAGE.

OEN "I think this is one of Chagall's better attempts at fantasy. . . .")

(This classifies the work as a fantasy, and makes a judgment --unsupported by reference to aspects of the work--that the work is a good one: hence the OEN classification.)

"This is an excellent example of surrealism; it has many characteristics of surrealism, but is a distinctive personal expression by Chagall. The defiance of gravity by figures and houses lends a surrealistic quality to the work, as do the unnatural colors used on the man's face and the animal's neck . . . the 'illogical' size relationships between the figures is another characteristic of Chagall, but in the tradition of surrealism, which breaks all logical rules of placement and juxtaposition of subject matter in an attempt to convey the idea that these rules are in themselves unreal . . . that they are merely man-made devices or conventions which define a certain type of 'reality' . . . the symbols of the man and animal are puzzling and unusual. . . .")

(TOTALS)

(There are two OES at the beginning of this response: one referring to characteristics associated with surrealism; another referring to characteristics associated with Chagall. These two OES subsume any cue attends about Style or Artist. The OES referring to surrealism is supported by statements about US --defiance of gravity and unnatural colors--and each of these is supported by LO and C references. These responses are arranged hierarchically thus: OES [four complexity points for US]; US [four complexity points for LO references] with a color reference as part of the US.

The OES referring to Chagall is supported by another US, "illogical size relationships," with an LO mention, plus a

recognition of Chagall's style (ST). Next comes a statement about surrealism which is evidence of previous knowledge of art history, H/C. Then comes a statement of the observer's inference about the theme, HTH. Last comes a slightly ambiguous response: "the symbols . . . etc." Although it refers to the fact that the man and animal are symbolic, it does not explain what they symbolize. Therefore, we cannot classify the statement as HSA. However, the observer recognizes that the man and animal symbols are unusual and puzzling, which classifies the remark as two US references, in terms of LO's, "man" and "animal.")

References

Acuff, B. Approaches to teaching for reflective thinking in art education. Stanford Institute on Teaching for Reflective Thinking, Summer, 1969.

Barron, F. Complexity-simplicity as a personality dimension. Journal of Abnormal and Social Psychology, 1953, 48, 163-72.

Berlyne, D. Conflict arousal and curiosity. New York: McGraw-Hill, 1960.

Broadbent, D. Perception and communication. New York: Pergamon Press, 1958.

Child, I. A study of esthetic judgment. New Haven: Yale University Press, 1964.

Eliott, A. Three hundred years of American painting. New York: Time, Inc., 1957.

Evaluation of art teaching. In E. W. Eisner & D. W. Ecker (Eds.), Readings in art education. Waltham, Mass.: Blaisdell Publishing Company, 1966. Pp. 96-120.

Feldman, E. Art as image and idea. Englewood Cliffs, N. J.: Prentice-Hall, 1967.

Gardner, R., Holtzman, P., Klein, G., Lurton, H., & Spence, D. Cognitive control: A study of individual consistencies in cognitive behavior. Psychological Issues, 1. New York: International University Press, 1959.

Holsti, O. Content analysis for the social studies and humanities. Menlo Park, Calif.: Addison-Wesley, 1969.

Kandinsky, W. Concerning the spiritual in art. New York: Wittenborn & Schultz, 1955. Reprinted from 1912 edition.

Lanzetta, J. Information acquisition in decision making. In O. J. Harvey (Ed.), Motivation and social interaction. New York: Ronald Press, 1963. Pp. 239-65.

Maltzman, I. On the training of originality. Psychological Review, 1960, 67, 229-42.

Miller, G. The magical number seven, plus or minus two: Some limits on our capacity for processing information. Psychological Review, 1956, 63, 81-97.

Salomon, G., & Suppes, J. Learning to generate subjective response uncertainty: The effects of training, verbal ability and stimulus structure. Journal of Personality and Social Psychology, 1972, 23 (in press).

Schutz, W. On categorizing qualitative data in content analysis. Public Opinion Quarterly, 1958, 22, 503-15.

Shannon, C. E., & Weaver, W. Mathematical theory of communication. Urbana: University of Illinois Press, 1949.

Sieber, J. Lessons in uncertainty. The Elementary School Journal, 1969, 69, 304-12.

Sieber-Suppes, J., & Acuff, B. Response complexity and esthetic inquiry: Some determinants of the complexity of children's responses to art. In preparation.

Sieber, J., & Lanzetta, J. Conflict and conceptual structure as determinants of decision-making behavior. Journal of Personality, 1964, 32, 622-41.

Sieber, J. E., & Lanzetta, J. T. Some determinants of individual differences in pre-decision information processing behavior. Journal of Personality and Social Psychology, 1966, 4, 561-71.

Simon, M. The Shorewood art reference guide. New York: Shorewood, 1970.

Smith, R. Methods of esthetic education. Studies in Art Education, 1968, 9, 21-26.

Weitz, M. Philosophy of the arts. Cambridge: Harvard University Press, 1950.

Wilson, B. An experimental study designed to alter fifth and sixth grade students' perception of paintings. Studies in Art Education, 1966, 8, 33-42.

APPENDIXES

APPENDIX A

ESTABLISHING THE RELIABILITY OF CATEGORIES

As we used the category system to classify remarks, we encountered five major difficulties related to validity and interjudge agreement:

Some of the categories were defined ambiguously. We redefined these categories until we were satisfied with their usefulness and clarity.

Some categories proved to be so closely related and so frequently associated in discourse that rules were required for distinguishing a borderline between them. See, for example, the distinction between hypothetical action and thought (HA, HT) categories explained on pages 81 and 82.

Hypothetical statements--especially Hypothesis-Nature of Object (HNO)--frequently gave several literal object or literal context cues. We decided that a simple HNO statement (i.e., one that does not cite pictorial evidence in support of the inference) in which Literal Object or Literal Context cues are mentioned would supercede the LO and LC classifications.

It was necessary to devise a system of ranking among some categories. Principle of Organization (PO), Technique (T), Color (C), and Comparative Relationships (CR) categories are frequently used together in discourse, with the T and CR categories serving as support for the PO statement.

The greatest difficulty was in securing interjudge agreement for obscure or ambiguous responses. It was sometimes necessary to change the phrasing of the response in order to arrive at agreement about the speaker's

intent or meaning before coding could proceed. Doubtful cases were resolved by discussion among judges.

Reliability

Most of the problems were resolved by comparing and discussing judges' codings of sample transcripts. After the first training period, each judge coded the same transcript independently. Judges then met to compare their opinions on the division of the protocol into thought units, and the classification of units into categories. There were three sources of disagreement: individual idiosyncracies or misunderstandings of categories; ambiguous categories; and ambiguities in the wording of the protocol. (A set of responses by an individual is referred to as a protocol.) Further revisions were made on the basis of this information according to the recommendations of Schutz (1958).

Following the second phase of training, each of the judges independently coded approximately 100 protocols. A comparison of these protocols was made to determine the degree of agreement between judges. Judge 1 was taken as a standard. The percentage of agreement of judges 2 and 3 with judge 1 was calculated for each category. The percentage of agreement for each category is shown in Table 2. The coefficient of reliability was calculated by determining the ratio of coding agreements to the total number of coding decisions made for each category (Holsti, 1969).

Some categories were not used frequently enough during this initial period to warrant calculating the percentage of agreement. These categories were retained for classification, however, since they were found to be useful in the actual content analysis of the statements coded later.

Table 2

Inter-Judge Agreement on Coding 100 Protocols

Cue-Attendance Categories

Name of Category	All Agree Judges 1,2,3	Judges 1,2 Agree	Judges 1,3 Agree	Average 1&2, 1&3
Material	1.00	1.00	1.00	1.00 *
Technique	.60	.70	.70	.70
Surface Quality	.91	.91	1.00	.96
Literal Object	.94	.97	.95	.96
Literal Context	.57	.86	.71	.79 *
Color	.97	.98	.99	.99
Line	.69	1.00	.69	.85
Shape	.94	.93	.98	.96
Light	.89	.89	1.00	.94 *
Comparative Relationship	.55	.89	.56	.72 *
Principle of Organization	.80	1.00	.80	.90 *
Expressive Quality	1.00	1.00	1.00	1.00 *
Unique Schemata	1.00	1.00	1.00	1.00 *
Pervasive Quality	.50	.50	.50	.50 *
Art Form	(not mentioned by any individual)			
Historical/ Cultural	(not mentioned by any individual)			
Style	.38	.50	.50	.50 *

* Fewer than 10 responses.

(Continued on next page)

Table 2 (Continued)

Hypothesis-Generation Categories

Name of Category	All Agree Judges 1,2,3	Judges 1,2 Agree	Judges 1,3 Agree	Average 1&2, 1&3
Hypothesis-Action	.56	.62	.83	.76
Hypothesis-Thought	.55	.81	.64	.71
Hypothesis-Sensations	.90	1.00	.90	.95
Hypothesis-Nature of Object	.63	.75	.75	.75
Hypothesis-Context	.74	.86	.81	.84
Hypothesis-Affect	.83	.92	.83	.88
Hypothesis-Subjective Feeling	(not mentioned by any individual)			
Hypothesis-Symbolic Aspects	1.00	1.00	1.00	1.00 *
Hypothesis-Thematic	.80	1.00	.80	.90
Hypothesis-Fantasy	1.00	1.00	1.00	1.00 *
Hypothesis-Artist	.71	.86	.91	.78 *
Hypothesis-Style	(not mentioned by any individual)			

Evaluative-Judgmental Categories

Affective Judgment, Not Supported	1.00	1.00	1.00	1.00 *
Affective Judgment, Supported	(not mentioned by any individual)			
Objective Evaluation, Not Supported	(not mentioned by any individual)			
Objective Evaluation, Supported	(not mentioned by any individual)			

APPENDIX B

RECORDING THE CODED PROTOCOL

In the foregoing sections of the manual, you learned how to code response units by writing the abbreviations of the category names at the left of the protocol.

In this section, you will learn how to transfer that information to a tally sheet. The tally sheet affords a way of determining the number of times each category is mentioned (i.e., the frequency distribution of responses). From this frequency distribution, a percentage distribution and an uncertainty score will be computed.

The next page shows a coded protocol, with totals for each category recorded in the margin. The coding of this protocol was then transferred to the tally sheet that follows. Notice that in the row of boxes following the f→ the simple points are recorded in the upper left portion of the box, and the complexity points are recorded in the lower right portion.

A Coded Protocol of "I and My Village"

C(5) 3LO

"Very bright colors:/ bright green/for the face . . . a bright orange next to the face . . ./bright yellow on these houses, and down here . . . a nice blue in the lower right and the upper left

~

. . . quite a few curves . . .)(then, I see triangles:/like there's a triangle for the blue;/I see quite a few triangles up here on the houses;/the face itself (animal) a triangle:/ there seem to be triangles right here in the red area,/behind those people. . . ."

SH(4) 2C 3LO

HTH(1) 2HNO(2) 2LO

"It seems to me like Christmas,/because this looks like a Christmas tree;/and it looks like they're sort of friends (the animal and man). . . ."

HT(1) LO

"This could be what the animal is thinking about:/ this little figure. . . ."

HNO(1) 2LO

"The animal has a necklace on:/ it could be his leash. . . ."

OEN HTH

"This is a very beautiful picture . . ./like a dream of a special occasion, like Christmas, as I said. . . ."

3C(5) 11 LO SH(4) 2 HTH(1) 3 HNO(3) HT(1) OEN (TOTALS)

Tally Sheet for Coded Protocol of "I and My Village"

		I. MATERIAL ATTRIBUTES				II. LITERAL ATTRIBUTES			III. SENSORY ATTRIBUTES				IV. ORGANIZATIONAL ATTRIBUTES			V. EXPRESSIVE ATTRIBUTES			VI. CONTEXTUAL ATTRIBUTES					
		M	T	SQ		LO	LC		C	L	SH	LT		CR	PO		EQ	US	PQ		AF	H/C	ST	TOTAL	
f→						11/0			3/5	1/0	1/4													16/9	
PROB →																									
H →																									H - CUES

		VII. MEANING AT IBUTES												VIII. CONTEXTUAL ATTRIBUTES				
		LITERAL REFERENCE	HA	HT	HS	HNO	HC	AFFECTIVE REFERENCE	HAF	HSF	SYMBOLIC REFERENCE	HSA	HTH	HF	HAR	HST	TOTAL	
f→				1/1		3/3							2/1				6/5	
PROB →																		
H →																		H - HYPOTHESES

		IX. AFFECTIVE OBJECTIVE RESPONSES						
		AJN	AJS	OEN	OES	TOTAL		
f→				1/0		1/0		
PROB →								
H →								H - EVALUATIVE-JUDGMENTAL

APPENDIX C

COMPUTING THE UNCERTAINTY (H) SCORE

The computation of the uncertainty (H) score was discussed briefly in the introduction. This appendix gives a step-by-step explanation and description of a procedure for computing the subjective response uncertainty of an individual as he responds to an art production.

Two kinds of information are needed:

1. A record (shown as a tally sheet) of the number of cues, hypotheses, and evaluative statements in each category.
2. The values of $p_i \log_2 \frac{1}{p_i}$ corresponding to values of p_i (see Table 3, p. 143).

The following is an overview of the steps we shall follow in order to compute the value of H:

1. Convert the frequency distribution of scores to a probability distribution.
2. Observe the probability value (p) of each category and determine the corresponding value of $p_i \log_2 \frac{1}{p_i}$ from Table 3.
3. Sum the values of $p_i \log_2 \frac{1}{p_i}$.

Ready?

Computation of Probability Distribution

What is a probability distribution?

The probability distribution of responses across a set of categories is a statement of the likelihood or probability that a given response will fall in each of the categories.

We assume that some response will definitely occur on every occasion, so the probability of some response is:

1. p = .5
2. p = .25
3. p = 1.00

Choose one.

If you answered:

1. No. $p = .5$ would mean that chances are there would be a response only half of the time.

2. No. $p = .25$ would mean that chances are there would be a response only one-fourth of the time.

3. Right! Some response will occur every time.

GO TO THE NEXT PAGE.

We assume p = 1.00 that some response will be made. Let's assume that there are 10 different kinds of responses possible. Each of these kinds of responses has some likelihood of being made on any given occasion. But two different responses can't be made at the same time. That is, one and only one response will occur each time. If we sum the probability of occurrence of each possible different kind of response, the sum must be equal to:

1. 10
2. 1.00
3. .10

Choose one.

If you answered:

1. No. This would mean that every one of the 10 responses was certain to occur on each occasion, but we already know that only one response can occur on each occasion.

2. Right!

3. No. This would mean that some response would occur only once in every 10 occasions, but we already know that some response will occur on every occasion.

GO TO THE NEXT PAGE.

So the probabilities of all categories must sum to 1.00. How are these probabilities determined? In other words, how do we determine the likelihood that a person will make a given response--before he makes it?

Obviously, we can only give a rough estimate of this probability based on past performance. This is, in fact, what we do.

Using the scores shown on the tally sheet that follows, how can we transform each one into a probability value such that all values sum to 1.00?

1. Divide the number of responses in each category by the total number of responses given.
2. Put a decimal point in front of the number of responses in each category.
3. Make the largest category p = 1.00 and the rest of the categories p = .00.

Choose one.

Tally Sheet Showing Frequency Data for Cue Attendance Responses to a Picture

		M	T	SQ		LO	LC		C	L	SH	LT		CR	PO		EQ	US	PQ		AF	H/C	SI	TOTAL	
f→	MATERIAL ATTRIBUTES	4/1	1/0	0/0	LITERAL ATTRIBUTES	2/0	0/0	SENSORY ATTRIBUTES	0/0	1/0	3/0	1/0	ORGANIZATIONAL ATTRIBUTES	0/0	2/1	EXPRESSIVI ATTRIBUTES	1/0	1/0	2/0	CONTEXTUAL ATTRIBUTES	2/0	0/0	0/0	20/2	H - CUES
PROB →																									
H →																									
		I.			II.			III.					IV.			V.				VI.					

		HA	HT	P'S	HNO	HC		HAF	HSF		HSA	HTH	HF		HAR	HST	TOTAL	
f→	MEANING ATTRIBUTES LITERAL REFERENCE						AFFECTIVE REFERENCE			SYMBOLIC REFERENCE				CONTEXTUAL ATTRIBUTES				H - HYPOTHESES
PROB →																		
H →																		
		VII.												VIII.				

		AJN	AJS	OEN	OES	TOTAL	
f→	AFFECTIVE OBJECTIVE RESPONSES						
PROB →							
H →							H - EVALUATIVE-JUDGMENTAL
		IX.					

If you answered:

1. Right!

2. No. This would not be equal to 1.00.

3. No. This would in no way correspond to the number of responses in each category.

GO TO THE NEXT PAGE.

TEAR OUT THE PRACTICE TALLY SHEET AT THE END OF THIS APPENDIX. NOW, COMPUTE THE p VALUE OF THE FIRST CATEGORY ON THE TALLY SHEET.

1. Number of simple responses in first category = 4

2. Total number of simple cue attendance responses = 20

3. 4/20 = .2

4. p (category) = .2 Right? Right.

COMPUTE THE PROBABILITY OF THE REST OF THE CUE-ATTENDANCE CATEGORIES. TO CHECK YOUR ANSWERS, GO TO THE NEXT PAGE.

Tally Sheet Showing Frequency and Probability Data

	I. MATERIAL ATTRIBUTES	M	T	SQ	II. LITERAL ATTRIBUTES	LO	LC	III. SENSORY ATTRIBUTES	C	L	SH	LT	IV. ORGANIZATIONAL ATTRIBUTES	CR	PO	V. EXPRESSIVE ATTRIBUTES	LO	US	PQ	VI. CONTEXTUAL ATTRIBUTES	M	H[illegible]	SI	TOTAL	
f →		4/1	[illegible]/0	[illegible]/0		2/0	0/0		0/0	1/0	3/0	1/0		[illegible]	[illegible]		[illegible]	[illegible]	2 [illegible]		2/[illegible]	[illegible]	0 [illegible]	[illegible]	
PROB →		.20/.50	.05/0	0/0		.10/0	0/0		0/0	.05/0	.15/0	.05/0		[illegible]/0	.0/.50		.05 [illegible]	.05 [illegible]	.10 [illegible]		[illegible]	[illegible]	0 0	1.00 [illegible]	H - [illegible]
H →																									

	VII. MEANING ATTRIBUTES	LITERAL REFERENCE	HA	HT	HS	HNO	HC	AFFECTIVE REFERENCE	HAF	HSF	SYMBOLIC REFERENCE	HSA	HTH	HF	VIII. CONTEXTUAL ATTRIBUTES	HAR	HSI	TOTAL	
f →																			
PROB →																			H - HYPOTHESES
H →																			

	IX. AFFECTIVE OBJECTIVE RESPONSES	AJN	AJS	OEN	OES	TOTAL	
f →							
PROB →							H - EVALUATIVE-JUDGMENTAL
H →							

Look up the $p_i \log_2 \frac{1}{p_i}$ value of each category by referring to Table 3. For Category I (M), p = .2. In Table 3 we see that for p = .2, $p_i \log_2 \frac{1}{p_i} = .47$. Look up the value of $p_i \log_2 \frac{1}{p_i}$ that corresponds to the p value for the rest of the categories.

Total the $p_i \log_2 \frac{1}{p_i}$ values in the box labeled H -Cues.

Check the $p_i \log_2 \frac{1}{p_i}$ values by consulting Table 3.

Check the total H score by turning to page 144 and the tally sheet which follows it.

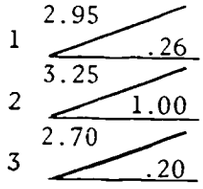
Table 3

Values of $p_i \log_2 \frac{1}{p_i}$ Corresponding to Values of p

p	$p_i \log_2 \frac{1}{p_i}$	p	$p_i \log_2 \frac{1}{p_i}$	p	$p_i \log_2 \frac{1}{p_i}$	p	$p_i \log_2 \frac{1}{p_i}$
.01	.05	.31	.52	.61	.44	.91	.12
.02	.10	.32	.52	.62	.43	.92	.11
.03	.15	.33	.53	.63	.42	.93	.10
.04	.18	.34	.53	.64	.41	.94	.08
.05	.21	.35	.53	.65	.41	.95	.07
.06	.24	.36	.53	.66	.40	.96	.06
.07	.27	.37	.53	.67	.39	.97	.04
.08	.29	.38	.53	.68	.38	.98	.03
.09	.31	.39	.53	.69	.37	.99	.01
.10	.33	.40	.53	.70	.36	1.00	.00
.11	.34	.41	.53	.71	.35		
.12	.37	.42	.53	.72	.34		
.13	.38	.43	.52	.73	.33		
.14	.40	.44	.52	.74	.32		
.15	.41	.45	.52	.75	.31		
.16	.42	.46	.52	.76	.30		
.17	.43	.47	.51	.77	.29		
.18	.45	.48	.51	.78	.28		
.19	.46	.49	.50	.79	.27		
.20	.47	.50	.50	.80	.26		
.21	.47	.51	.50	.81	.25		
.22	.48	.52	.49	.82	.24		
.23	.49	.53	.48	.83	.23		
.24	.49	.54	.48	.84	.22		
.25	.50	.55	.47	.85	.20		
.26	.50	.56	.47	.86	.19		
.27	.51	.57	.46	.87	.18		
.28	.51	.58	.46	.88	.16		
.29	.51	.59	.45	.89	.15		
.30	.52	.60	.44	.90	.13		

Sum these values to determine the total score.

Did you get



If you got 1 or 3, add them again and see what you get this time.

Tally Sheet Showing Values of $p_i \log_2 \frac{1}{p_i}$ for Each Cue Attendance Category

		M	T	SQ		LO	LC		C	L	SH	LT		CR	PO		EQ	US	PQ		AF	H/C	ST	TOTAL	
f→																									
PROB →																									
H →	MATERIAL ATTRIBUTES	.47/.50	.21/0	0/0	LITERAL ATTRIBUTES	.33/0	0/0	SENSORY ATTRIBUTES	0/0	.21/0	.41/0	.21/0	ORGANIZATIONAL ATTRIBUTES	0/0	.33/.50	EXPRESSIVE ATTRIBUTES	.21/0	.21/0	.33/0	CONTEXTUAL ATTRIBUTES	.33/0	0/0	0/0	3.25/1.00	H - CUES
		I.				II.			III.				IV.			V.				VI.						

		HA	HT	HS	HNO	HC		HAF	HSF		HSA	HTH	HF		HAR	HST	TOTAL	
f→																		
PROB →																		
H →	MEANING ATTRIBUTES / LITERAL REFERENCE						AFFECTIVE REFERENCE			SYMBOLIC - REFERENCE				CONTEXTUAL ATTRIBUTES				H - HYPOTHESES
		VII.												VIII.				

		AJN	AJS	OEN	OES	TOTAL	
f→							
PROB →							
H →	AFFECTIVE OBJECTIVE RESPONSES						H - EVALUATIVE-JUDGMENTAL
	IX.						

The Category System, With Codes

CUE-ATTENDANCE CATEGORIES
(Primarily Descriptive)

I. MATERIAL ATTRIBUTES
- (M) Material
- (T) Technique
- (SQ) Surface Quality

II. LITERAL ATTRIBUTES
- (LO) Literal Object
- (LC) Literal Content

III. SENSORY ATTRIBUTES
- (C) Color
- (L) Line
- (SH) Shape
- (LT) Light

IV. ORGANIZATIONAL ATTRIBUTES
- (CR) Comparative Relationship
- (PO) Principle of Organization

V. EXPRESSIVE ATTRIBUTES
- (EQ) Expressive Quality
- (US) Unique Schemata
- (PQ) Pervasive Quality

VI. CONTEXTUAL ATTRIBUTES
- (AF) Art Form
- (H/C) Historical/Cultural
- (ST) Style

HYPOTHESIS-GENERATION CATEGORIES
(Primarily Interpretive)

VII. MEANING ATTRIBUTES

Literal Reference
- (HA) Hypothesis - Action
- (HT) Hypothesis - Thoughts
- (HS) Hypothesis - Sensations
- (HNO) Hypothesis - Nature of Object
- (HC) Hypothesis - Context

Affective Reference
- (HAF) Hypothesis - Affect
- (HSF) Hypothesis - Subjective Feeling

Symbolic Reference
- (HSA) Hypothesis - Symbolic Aspect
- (HTH) Hypothesis - Thematic
- (HF) Hypothesis - Fantasy

VIII. CONTEXTUAL ATTRIBUTES
- (HAR) Hypothesis - Artist
- (HST) Hypothesis - Style

EVALUATIVE-JUDGMENTAL CATEGORIES
(Primarily Evaluative)

IX. AFFECTIVE, OBJECTIVE RESPONSES
- (AJN) Affective Judgment, Not Supported
- (AJS) Affective Judgment, Supported
- (OEN) Objective Evaluation, Not Supported
- (OES) Objective Evaluation, Supported

Practice Tally Sheet

	I. MATERIAL ATTRIBUTES	M	T	SQ	II. LITERAL ATTRIBUTES	LO	LC	III. SENSORY ATTRIBUTES	C	L	SH	LI	IV. ORGANIZATIONAL ATTRIBUTES	CR	PO	V. EXPRESSIVE ATTRIBUTES	LQ	US	PQ	VI. CONTEXTUAL ATTRIBUTES	AI	H/C	SI	TOTAL	
f→																									
PROB→																									H - CUES
H→																									

	VII. MEANING ATTRIBUTES	LITERAL REFERENCE	HA	HT	HS	HNO	HC	AFFECTIVE REFERENCE	HAF	HSF	SYMBOLIC REFERENCE	HSA	HTH	HI	VIII. CONTEXTUAL ATTRIBUTES	HAR	HSI	TOTAL	
f→																			
PROB→																			H - HYPOTHESIS
H→																			

	IX. AFFECTIVE OBJECTIVE RESPONSES	AJN	AJS	OEN	OES	TOTAL	
f→							
PROB→							H - EVALUATIVE-JUDGMENTAL
H→							