ART CRITICISM IN THE CLASSROOM

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Abstract

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The author of this paper designed a test to study two questions about critical influence: the effect on young students, of simple evaluative statements about art; and the directional pressure they may feel from parents and teachers on their own artistic judgements. The children, aged 7 - 12 years, belonged to two extracurricular art classes, treated as control and test groups. The test comprised two gallery visits and two questionnaires. Response patterns were analyzed primarily by means of the chi-square test of statistical significance. It was found that the evidence did not support a conclusion that tendentious statements contained in one of the questionnaires, had any significant effect on the pupils' attitudes. Moreover, the children appeared to feel very little judgemental influence from their parents, and very little affective influence from their teachers. The paper also recommends a simple questionnaire--part of the test design--together with a device for amplifying strong response patterns, to be used by the ordinary art teacher for purposes ranging from art appreciation discussions, to curriculum design.
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CHAPTER I

INTRODUCTION

Preliminary Remarks

There is universal agreement that traditional art is good (a position, indeed, which is virtually impregnable), but the same is not true of contemporary art. Not enough time has passed to allow for the condensation and solidification of critical orthodoxy, for the emergence of 'safe' attitudes and sentiments. Anyone who reads newspaper art reviews, exhibition catalogues or brochures, coffee-table art books and arty periodicals, anyone who eavesdrops at vernissages, knows that there are ready-made statements about art which are picked up and used by the ill-at-ease, possibly because they have little or nothing to say on their own account, yet lack the sense or the courage to be silent. This is where art critics, gallery owners, art grant entrepreneurs, and in general, those who control the trends, fads, styles and subject-matter of art, are most effective. They formulate phrases, expressive generally of the ineffable, which filter down (in appropriately vulgarized forms) to the general public, the average schoolteacher, and—most remotely—to the ordinary student. One notices indeed, that this 'art-speak' is very often accorded more respect than the work of art itself. Nor are artists always guiltless: given two painters of about equal merit, the one with the best line of art-speak usually gets the grant.
Is the unaided understanding of art really possible for the majority of people? Or is the art middleman—the packager, the wholesaler, the retailer, the publicist, the whole mercantile apparatus—indispensable to the public's appreciation of art? Must an average person approach the contemporary art scene vicariously, as it were, thinking alien thoughts and seeing with alien eyes?

If we are speaking of the way things are, then the answer to these questions is almost certainly, yes. But if we are speaking of the way things should be, then the answer (with equal certainty) is, no. And it is one of the responsibilities of the teacher to try to ensure that things will be the way they should be. This means, in the first instance, educating public taste while the public is still young enough to be educable. But it means more. It means that we must foster in our pupils the interest, the willingness and the capacity to form independent judgments about art, and to have sufficient confidence in them to withstand a fast line of talk. No amount of talk will make good art into bad art, or bad into good. And if a work of art needs to be propped up with philosophy, then it is—at best—incomplete. But art teachers are not always themselves gifted with a capacity for the confident formation of independent opinion, so how can they be expected to teach what they don't know?

The present paper is an attempt to find a solution to this problem. The author designed a test to study two questions about influence: the effect on very young students, of certain kinds of
simple evaluative statements about art; and the directional pressures children may feel from parents and teachers on their own artistic judgements. The paper also recommends a simple questionnaire (part of the test design) as an instrument of art pedagogy, for use even by inexperienced teachers, for purposes ranging from art appreciation discussions to curriculum design. It is shown that—with the aid of the questionnaire—a teacher need not be an 'art expert' to encourage and direct the growth of her pupils' critical faculties along lines natural to them, and it is suggested that such direction and encouragement be begun early.

Observations on the Test Design

Students from two children's art classes were taken to an exhibition of contemporary art¹ and asked to complete test questionnaires² for each of twenty paintings. In practice, this proved to be an ordered and unbiased method of focussing students' attention on works of art—usually a difficult task. Simple 'yes' or 'no' responses to the questions were designed to relieve the young viewers of the awkward chore of expressing answers in longhand, which would have been a heavy encumbrance because of the children's ages, and because of the large number of evaluations they had to make (240 on each of two occasions). It was important, also, to

¹Appendix A.
²Infra, pp.12, 13.
concentrate the children's attention upon the paintings and not upon their answer sheets. The long periods of careful observation seem to have impressed the children not only with the visual side of what they criticized, but also with the critical side of what they viewed. It was apparent that the students had become fully familiar with the paintings in the exhibition, and that they were interested in discussing this familiarity with their teachers. The degree of response—whether pro or con—proved to be a good vehicle by which the student was able to take the images away with him after the picture was out of sight.

The test provided the students with the opportunity to think clearly and critically, and it obliged them to respond with definite choices. No test of this kind should allow the choices 'yes', 'no', and 'I don't know', because choosing 'I don't know' frequently represents no choice at all. The questions may appear to have been very naive, but this was deliberate: the questions were made simple to limit the possibility of misunderstanding them. One might also object that such black and white responses allowed for no subtle variation in judgement by the young critics. But in examining pairs of statements such as, 'I like this painting' and 'This is a good painting', one sees that identical responses from the same students are by no means the norm, and therefore, a certain amount of subtlety is built into the test. In other words, simple 'yes' and 'no' responses do not entirely preclude grey areas of judgement about the works of art in the exhibition.
The children had little difficulty with the questionnaires, but they did have problems with the coherent expression of their reactions in a follow-up discussion class. No one is likely to deny that most adult-child conversations are directed towards (putatively) child-centred topics. But the notion commonly held that 'children don't like words', is a feeble one, and only exacerbates problems of muddled verbal expression. Children's linguistic abilities will improve only if they have the opportunity to discuss things normally outside their sphere of interest. The important thing to note in the test analysis and the transcripts of the discussions which follow, is not how poorly the children expressed themselves, but how well they reasoned and what they understood. Their lamentable use of the spoken language should not blind us to the fact that their critical abilities were surprisingly sharp and certain, and in some cases, rather subtle.

Survey of Extant Art Tests

A brief survey of some existing art tests follows.

The Rutgers Drawing Test. Ages 4-6, 6-9; 1952-69. This is an exercise in copying, described by its author, Anna Spiesman Starr, as a 'non-verbal test of increasing difficulty to tap such abilities as

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1Appendices B-E.

2For more detailed descriptions and criticisms of these and other tests, see the Seventh Mental Measurements Yearbook, and Tests in Print II.

3Seventh Mental Measurements Yearbook, p. 830.
perception of form and space, analysis of design in reproduction, motor coordination, critical attention and a demonstration [sic] of how the child revealed his personality strength in attacking a new and unfamiliar problem. The MMY reviewer, Melvyn I. Semmel, says it is 'essentially a test of visuomotor ability'.

The Torrance Tests of Creative Thinking, Research Edition. Kgn [sic] through graduate school; 1966. Leonard L. Baird, reviewing the tests for MMY, says they are 'designed to measure four aspects of "creative thinking"—fluency, flexibility, originality, and elaboration. Two scores for each aspect are provided—[he goes on]—verbal and figural.' Another MMY reviewer, Michael A. Wallach, says that 'like intelligence tests, the Torrance tests will help teachers sift out more from less talented students,' but complains that, 'we are left with the nagging suspicion that the major effect of the tests will be to give intelligence assessment a more respectable name.'

The Barron-Welsh Art Scale: A Portion of the Welsh Figure Preference Test. Ages 6 and over; 1959-63. This gives a 'non-verbal measure of complexity-simplicity related to artistic taste and talent', according to one of its authors, Frank Barron. He describes the

1 Ibid.
2 Ibid., p. 836.
3 Ibid., pp. 839-40.
correlates of the test: 'A liking for complex figures is related negatively to rigidity, constriction, social conformity, subservience to authority, politico-economic conservatism, and ethnocentrism; it is related positively, however, to originality, verbal fluency, expression as opposed to repression of impulse, and to cathexion [sic] of intellectual activity.' If this does what its author claims, then it sorts out not only the sheep from the goats, but the good guys from the bad guys, however all reviewers note that it is difficult to determine just what aspect of creativity the test is trying to measure.


The Meier Art Tests: 2. Aesthetic Perception. Grades 9-16 [sic] and adults; 1963. Art Judgement is a collection of 100 paired illustrations adapted (as the test's author puts it) 'from selected works of art'. The test candidate must choose one from each pair. There are 'right' and 'wrong' choices, depending upon which one of each nearly identical pair is selected as being 'superior'. Depth cues, shading, design, composition, variety, diagonality, verticality, horizontality, contrast, complexity, etc., etc., etc., determine the 'right' selections, one supposes, but the standards of excellence

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1This word is not listed in The International Webster New Encyclopedic Dictionary of the English Language & Library of Useful Knowledge (New York: Tabor House, 1972). The nearest approximation is, 'cathexis, n. The channeling of psychic energy in an object'.

2Mental Measurements Yearbook, p. 82.
are archaic. Aesthetic Perception, according to the MMY reviewer, Laurence Siegel\(^1\), is 'an experimental test probably measuring something related to artistic ability. The nature and utility of the functions measured are not clarified by the data provided in the preliminary manual. The independence of these functions from those measured by Art Judgement also remains to be demonstrated.'

There are plenty of other tests as well: Advanced Placement Examination in Art (High school; 1972-73); Art Vocabulary (Grades 7-16 [sic]; 1969); Graves Design Judgement Test (Grades 7-16 [sic] and adults; 1948); Horn Aptitude Inventory (Grades 12-16 [sic] and adults; 1939-53); Knauber Art Vocabulary Test (Grades 7-16 [sic]; 1932-35); and many, many more.

Most of these are designed to measure some aspect of art ability. Tests which contain sets of aesthetic examples (cf., e.g., the Meier Tests) can measure responses to those, and only those examples. They fail (as, indeed, they must fail) to take into account the passage of time, the ebb and flow of fashion, the fact that each generation rejects most forcibly the style of its immediate predecessors. And if they seek to stay current by frequent new editions, they lose their fixed points of reference. In the attempt to gauge 'talent', the tests may succeed, according to their own standards. But this is at best a dubious enterprise, no less dubious than that of ranking children according to IQ.

\(^1\)Ibid.
CHAPTER II

THE TEST

A Statement of the Problems

The test was designed to investigate three problems:

1. To what degree are children's opinions of works of art governed by the way in which critical or evaluative statements are phrased? In particular, do remarks about paintings which invite a favourable response induce measurably different opinions, from remarks which invite an unfavourable response?

2. How strongly are children's attitudes affected by those of their parents and teachers, or by what children may imagine them to be?

If we find that our pupils are easily influenced either by tendentious art criticism (using the expression 'art criticism' very loosely) or by what often amounts to the same thing, the explicit or implicit, the real or imagined pressure of parents' and teachers' opinions, then we must ask ourselves whether we might not be 'crowding' our pupils too much, denying them adequate room for the independent development of taste. If, on the other hand, we find that children are not easily influenced by what we say about art, or by how we say it, then we must question whether a policy of scrupulous equivocation and noncommittal 'fairness' to all art with which we bring them into contact, the attempt to conceal our own opinions and tastes, does not deprive children of a useful, healthy, indeed necessary stimulus to the growth of judgement.
The remaining problem we considered was:

3. To develop a questionnaire for classroom use which will show us what kind of art the pupils really like, which will add structure to gallery visits and serve as a basis for art appreciation discussions, which will supply a procedure enabling us to tailor our art curriculum to the specific groups with which we work.

Such a questionnaire should free the teacher, to some degree at least, from an arid dependence on 'ed-psych' formulae in the design of art curricula.

The first two problems relate to sociological aesthetics, the third is pedagogical, though in practice no such fine distinction is drawn: a single test question may serve a number of purposes. This will be apparent as results are amalgamated and analyzed.

No doubt a test designed to do a single job will do it better than a test designed to do that job among several: procedures which work well for one sort of problem can be expected to work less well for another. However, the logistics of economy and time may dictate (as indeed they did in the present case) that a single test be given, and that the associated questionnaires be short, for if one is forever testing, one is not teaching.

**Test Conditions and Data Collection**

The pupils examined were drawn from two groups. One group was treated as a control group (for the purposes of Problem 1), and designated Group M. They belonged to an extracurricular art class given by the author and organized by the Parents' Association.
of the Jewish Peoples' and Peretz Schools in Montreal. The other
group was treated as a test group (for Problem 1) and designated
Group N. They belonged to an extracurricular art class given by
Mrs. Audrey Nothnig Cayne at the Saidye Bronfman Centre in Montreal.
The pupils in Group M ranged in age from nine to twelve years;
the pupils in Group N ranged from seven to eleven.

The tests were given in mid-December 1973. Unfortunately,
some students began their winter vacation early, and this cut into
the number available for testing; Group M had nine members and
Group N had seven. This in no way invalidates the test, however,
since cell populations for the chi-square contingency table approx-
imation to the multinomial distribution—the principal method
used for analysis—can safely fall as low as five and even as low
as one in some situations.\(^1\) The results are thus valid for the
sample tested, but no larger claim is made; the pupils were not
randomly selected from the population at large, they were self-
selected from a single socio-economic, ethno-cultural group. They
had voluntarily enrolled in the extracurricular classes, and all
available members of the classes were tested. All the pupils were
of Jewish background, upper-middle income family, and all resided
in the western suburbs of Montreal. The test, therefore, should
be regarded as a pilot experiment. It is the technique which is
recommended, not the universality of the results.

\(^1\)Mendenhall, William, *Introduction to Probability and
p. 285.
The children were invited to look at twenty paintings (numbered 1 to 20) drawn from an exhibition which opened 1 December 1973 at the Saidye Bronfman Centre, titled New York Avant-Garde 74. They were asked to complete a separate questionnaire for each painting selected from the exhibition. The questionnaires were read to the pupils, who wrote their numbered answers ('yes' or 'no') on pads of paper. Each painting was given its own numbered page in order to avoid mistakes in answering. The test comprised two questionnaires:

**Questionnaire I.**

1. This is a good painting. (yes or no)

2. I like this painting. (yes or no)

3. I could paint a better one. (yes or no)

4. This painting is the right size. (yes or no)

5. This painter uses good colours. (yes or no)

6. I wish I had made this picture. (yes or no)

7. This picture makes me feel good. (yes or no)

8. I would like to have this picture at home in my room. (yes or no)

9. This artist is doing the best work he can. (yes or no)

10. My parents would like this picture. (yes or no)

11. My teacher likes this picture. (yes or no)

12. I would pay one year's allowance for this picture. (yes or no)

1 For descriptions and slides of the paintings, see Appendix A.
Questionnaire II.

1. This is a bad painting. (yes or no)
2. I dislike this painting. (yes or no)
3. I could paint a better one. (yes or no)
4. This painting is the wrong size. (yes or no)
5. This painter uses bad colours. (yes or no)
6. I'm glad I didn't paint this picture. (yes or no)
7. This picture makes me feel awful. (yes or no)
8. I would hate to have this picture at home in my room. (yes or no)
9. This artist could do better work. (yes or no)
10. My parents would hate this picture. (yes or no)
11. My teacher dislikes this picture. (yes or no)
12. I would pay one year's allowance for this picture. (yes or no)

Note that, in most cases, each statement in Questionnaire II is a strong negation of the correspondingly-numbered statement in Questionnaire I. Questions 3 and 12 are identical on both questionnaires, and were introduced as controls. Each pupil in each group viewed each painting on two occasions separated by a week. The pupils in Group M were asked to complete Questionnaire I on each occasion. The pupils in Group N were asked to complete Questionnaire I the first week, and Questionnaire II the second week.

In what follows, we let F represent a favourable response by one pupil on one occasion to one statement about one painting (favourable, that is, to the painting); U will represent an
unfavourable response. In Questionnaire I, F was associated with a 'yes' response to questions 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, and U with a 'no' response. F was associated with a 'no' response to question 3, and U with a 'yes' response. In Questionnaire II, F was associated with a 'no' response to questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and U with a 'yes' response. On question 12, F was associated with 'yes' and U with 'no'. The results for each statement, each painting, and each pupil in each group were recorded as one of the following:

A ≡ (F,F): both responses favourable;
B ≡ (U,U): both responses unfavourable;
C ≡ (F,U): first favourable, second unfavourable;
D ≡ (U,F): first unfavourable, second favourable;

where 'first' and 'second' refer to first week of testing and second week of testing, respectively. The responses of types A, B, C, D, were then enumerated and the data were gathered into Tables 1 and 2. Clearly, for each group, each question, and each painting, number of F's in Week 1 = number of A's + number of C's;
number of F's in Week 2 = number of A's + number of D's;
number of U's in Week 1 = number of B's + number of D's;
number of U's in Week 2 = number of B's + number of C's;
thus the raw data are easily recoverable.
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**TABLE 2**

RESPONSE FREQUENCIES FOR GROUP A.
Test Limits and Controls

Before beginning an analysis of the test results one must state clearly what conclusions can be demonstrated, and what cannot. This involves the role of the null hypothesis in experimental design, which Sir Ronald Fisher characterized this way:\(^1\)

The two classes of results which are distinguished by our test of significance are, on the one hand, those which show a significant discrepancy from a certain hypothesis ... and on the other hand, results which show no significant discrepancy from this hypothesis. This hypothesis, which may or may not be impugned by the result of an experiment, is again characteristic of all experimentation. Much confusion would often be avoided if it were explicitly formulated when the experiment is designed. In relation to any experiment we may speak of this hypothesis as the 'null hypothesis', and it should be noted that the null hypothesis is never proved or established, but is possibly disproved, in the course of experimentation. Every experiment may be said to exist only in order to give the facts a chance of disproving the null hypothesis.

With regard to the specific analytic technique used in the present study (viz., the chi-square contingency table approximation to the multinomial distribution), William Mendenhall warns that:\(^2\)

... nonrejection of the null hypothesis does not imply that it should be accepted. We would have difficulty in stating a meaningful alternative hypothesis for many practical applications and, therefore would lack knowledge of the probability of making a type II error....

Accepting the null hypothesis when it is false is called a type II error for a statistical test.

Therefore, the problems under analysis will be framed so as to admit of an explicit formulation of the null hypothesis in each case.


\(^2\)Mendenhall, op. cit., pp. 298, 132.
If the data should prove inadequate to reject any of the null hypotheses connected with the test, we will not make type II errors in our anxiety to generate conclusions which are more firm and significant than the evidence allows.

In order to ensure that Groups M and N might legitimately be employed as control and test groups, respectively, it was necessary to determine that their responses to Questionnaire I did not differ significantly from each other in the first week of testing. This was done by comparing the number of F's obtained in each group for questions 1 - 12, summing over the twenty paintings. The results appear in Table 3, below.

**TABLE 3**

**FREQUENCY OF F RESPONSES IN WEEK I**

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<th>Group</th>
<th>Question Number</th>
<th>Row Totals</th>
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\[ \chi^2 = 10.85287 \]
Number of degrees of freedom = 11
Level of significance = .456
The correlation found between the group classification and the distribution of favourable replies was at no better than the .45 level of significance. That is, we can be no more than 55% confident that differences between the response patterns of the two groups in the first week of testing did not occur by chance. This confidence level is not an adequate objection to the use of M as control and N as test group. Social scientists typically accept as statistically significant those relationships which have only a .05, .01, or .001 probability of occurring by chance,¹ and our data appear to have had better than a .45 probability of this. The null hypothesis, here, is the hypothesis that the two groups did not respond in significantly different ways to the questionnaire, and the data present no evidence strong enough to reject it.

Analysis of Problem 1

Recall now the first problem we set ourselves:²

To what degree are children's opinions of works of art governed by the way in which critical or evaluative statements are phrased? In particular, do remarks about paintings which invite a favourable response induce measurably different opinions, from remarks which invite an unfavourable response?

We must sharpen the formulation of this somewhat, that it may be amenable to the techniques we have at hand. The pupils in Group M were given Questionnaire I on both occasions. The only variable

²Supra, p. 9.
here is the passage of time. Thus, it should be possible to find out what changes in the pupils' attitudes are effected by time alone, and to get some measure of these changes.¹

To illustrate the procedure, let us isolate one question, say Group M's question 1, and count the number of A's, B's, C's, and D's recorded against it (summing over the twenty paintings). This gives (from Table 1):

Frequency of A's = 136;
Frequency of B's = 25;
Frequency of C's = 14;
Frequency of D's = 5.

We must distinguish between changes (designated C) from F to U—changes which are the effect of what might be called 'natural deterioration' of opinion—and changes (designated D) from U to F—the effect of 'natural amelioration' of opinion. We must also distinguish between the two kinds of case in which there is no change: those designated A—F both times—and those designated B—U both times. Moreover, we are not interested simply in the number of A's, B's, C's, and D's, but rather in their proportions. But in which proportions? The proportions, for example, of replies of the different kinds relative to the total number of replies, make comparison between the two groups easier, but otherwise, they convey

¹See also Appendix B.
scarcely more information than do the raw numbers. What is needed is
the conditional proportions, e.g., we must know what proportion of
F responses in week 1 were also F responses in week 2. These conditional
proportions will give an estimate of the pupils' propensity to change
(or not to change) their opinions from one week to the next, relative
to their original opinions.

If we denote by
F₁, an F response in week 1;
F₂, an F response in week 2;
U₁, a U response in week 1;
U₂, a U response in week 2;
then (abusing probability notation somewhat) we want estimates of
the conditional probabilities
P(F₂|F₁), P(U₂|F₁), P(F₂|U₁), P(U₂|U₁),
for each group and each question.

The best estimates for these are obtainable by taking the
ratio of the means. In the illustration from Group M's question 1,¹
these give
P(F₂|F₁) = No. of A's + (No. of A's + No. of C's) = 136/150 = 90.67%;
P(U₂|F₁) = No. of C's + (No. of A's + No. of C's) = 14/150 = 9.33%;
P(F₂|U₁) = No. of D's + (No. of B's + No. of D's) = 5/30 = 16.67%;
P(U₂|U₁) = No. of B's + (No. of B's + No. of D's) = 25/30 = 83.33%.
Thus, for example, a pupil chosen arbitrarily from Group M, who

¹ Supra, p. 20.
answered question 1 affirmatively the first week with reference to an arbitrary painting, is approximately 91% likely to have given the same answer to the same question about the same painting in the second week. Note that

\[ P(F_2|F_1) + P(U_2|F_1) = 1; \]
\[ P(F_2|U_1) + P(U_2|U_1) = 1; \]

and this is always true. Therefore, we need consider only one member of each pair of conditional probabilities, since the other is immediately recoverable from it. Let us settle on \( P(F_2|F_1) \) and \( P(U_2|U_1) \): these are measures of the pupils' propensities not to change an opinion from one week to the next.

The pupils in Group N were given Questionnaire I on the first occasion, and Questionnaire II on the second. There were thus two variables involved: the passage of time and the phrasing of the questions.\(^1\) If we follow the same procedure in estimating \( P(F_2|F_1) \) and \( P(U_2|U_1) \) as we did with Group M, then we can compare these estimates question by question with those obtained from Group M. Moreover, in the contingency tables, the changes due to time alone—'natural deterioration' and 'natural amelioration'—should 'cancel out' to a large degree, between the groups, and whatever differences are left—if any—should be the effect of the altered phrasing of the statements in Questionnaire II.

The conditional proportions \( P(F_2|F_1) \) over questions 1 - 12 for each group are displayed in Table 4.

\(^1\) See Appendix B.


-23-

TABLE 4

ESTIMATED PROPENSITIES TO MAINTAIN FAVOURABLE OPINIONS

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<td>N</td>
<td>88 83 82 81 86 83 93 81 92 78 77 48 (%)</td>
</tr>
</tbody>
</table>

Note that Group N had higher $P(F_2 | F_1)$ on every question except numbers 1, 2, 3, 5, 12. That is, on all but these five questions, the proportion of pupils who answered favourably the second week given that they had answered favourably the first week, was higher in Group N than it was in Group M. Thus, the rephrasing of questions in Questionnaire II appears to have had a deteriorative effect on favourable replies only for these questions (if indeed it had any effect at all!). But questions 3 and 12 are control questions, unchanged between the two questionnaires, as mentioned before, so in fact any effect of rephrasing is evident only in questions 1, 2, and 5. The group versus response correlations on these questions are displayed in Tables 5A, 5B, 5C, and are found to be of little or no account in each case. That is, with respect to favourable replies, the (null) hypothesis that the two groups behaved essentially the same from week to week on questions 1, 2, and 5 cannot reasonably be rejected on the basis of these data.
### TABLE 5A

**Frequency of Favourable Responses to Question 1**

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F_1 = (A - C)$</td>
<td>$F_2/F_1 = (A)$</td>
</tr>
<tr>
<td>M</td>
<td>150</td>
<td>136</td>
</tr>
<tr>
<td>N</td>
<td>104</td>
<td>92</td>
</tr>
<tr>
<td>Column Totals</td>
<td>254</td>
<td>228</td>
</tr>
</tbody>
</table>

$x^2 = 0.0173$

Number of degrees of freedom = 1
Level of significance = .895

### TABLE 5B

**Frequency of Favourable Responses to Question 2**

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F_1 = (A - C)$</td>
<td>$F_2/F_1 = (A)$</td>
</tr>
<tr>
<td>M</td>
<td>137</td>
<td>116</td>
</tr>
<tr>
<td>N</td>
<td>95</td>
<td>79</td>
</tr>
<tr>
<td>Column Totals</td>
<td>232</td>
<td>195</td>
</tr>
</tbody>
</table>

$x^2 = 0.0083$

Number of degrees of freedom = 1
Level of significance = .927
### TABLE 3C

**FREQUENCY OF FAVOURABLE RESPONSES TO QUESTION 5**

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F_1 \ (= A + C)$</td>
<td>$F_2</td>
</tr>
<tr>
<td>M</td>
<td>147</td>
<td>133</td>
</tr>
<tr>
<td>N</td>
<td>101</td>
<td>87</td>
</tr>
<tr>
<td>Column Totals</td>
<td>248</td>
<td>220</td>
</tr>
</tbody>
</table>

$\chi^2 = .068$

Number of degrees of freedom = 1

Level of significance = .794

If we now use Table 4 to compare the conditional proportions $P(F_2 | F_1)$ of favourable replies from week to week between the two groups on the test questions alone (no.'s 1, 2, 4, 5, 6, 7, 8, 9, 10, 11), we find that $\chi^2 = 5.98994$, with nine degrees of freedom. This gives a correlation at about the .75 significance level, between the group classification and the distribution of conditional proportions. That is, we can be not much more than 25% confident that the students in the two groups exhibited markedly **different** tendencies to change favourable opinions. More briefly, any difference between the Group M and Group N students' propensities not to change their minds, is approximately 75% likely to have occurred **by chance**. Thus, there is little evidence to support the hypothesis that the
rephrased questions of Questionnaire II had any effect at all on favourable responses, at least, nor of the type which might have been expected.

If we look at the aggregate of favourable responses over the test questions, we see that in Group M there was a decline of 248 F's (21%) from week 1 to week 2, while in Group N, there was a decline of 135 F's (only 16%) over the same period. The aggregate frequencies are compared in Table 6.

TABLE 6
AGGREGATE FAVOURABLE RESPONSES OVER TEST QUESTIONS

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F₁ (−A + C)</td>
<td>F₂</td>
</tr>
<tr>
<td>M</td>
<td>1175</td>
<td>927</td>
</tr>
<tr>
<td>N</td>
<td>852</td>
<td>717</td>
</tr>
<tr>
<td>Column Totals</td>
<td>2027</td>
<td>1644</td>
</tr>
</tbody>
</table>

χ² = .927
Number of degrees of freedom = 1
Level of significance = .336

The correlation here is at about the .33 level of significance, i.e., the pattern has approximately a one in three probability of occurring by chance. This is a very weak correlation, but if it shows anything,
it shows that the test group, the group subjected to the tendentious questionnaire in the second week, displayed less propensity to change favourable opinions than the control group did! Thus, there was nothing in the behaviour of Group N from week 1 to week 2 which may not be accounted for on the basis of 'natural deterioration' of opinion.

Let us now examine the two groups with an eye to the 'natural amelioration' of opinion. The conditional proportions \( P(U_2 | U_1) \) over questions 1 - 12 for each group appear in Table 7.

**TABLE 7**

**ESTIMATED PROPENSITIES TO MAINTAIN UNFAVOURABLE OPINIONS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Question Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1  2  3  4  5  6  7  8  9  10 11 12</td>
</tr>
</tbody>
</table>
| M     | 83 72 70 72 76 81 81 82 79 67 21 87 | (\%)
| N     | 81 78 70 60 67 75 68 75 79 63 38 79 | (\%)

Note that Group N had lower \( P(U_2 | U_1) \) on every question except numbers 2 and 11. That is, on all but these two questions, the proportion of pupils who maintained unfavourable opinions from the first to the second week was higher in Group M than it was in Group N. The frequency of U's for both groups on questions 2 and 11 is compared in Tables 8A and 8B.
**TABLE 8A**

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$U_1 { -B + D }$</td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>45</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>$U_2</td>
<td>U_1 { -B }$</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\gamma$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>88</td>
<td>154</td>
</tr>
</tbody>
</table>

$x^2 = .0535$

Number of degrees of freedom = 1

Level of significance = .817

**TABLE 8B**

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$U_1 { -B + D }$</td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>45</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>$U_2</td>
<td>U_1 { -B }$</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\gamma$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>97</td>
</tr>
</tbody>
</table>

$x^2 = 1.3072$

Number of degrees of freedom = 1

Level of significance = .253
The differences in question 2 are of little account. The pattern in question 11, however, has only about one chance in four of occurring fouruitously. In Group M, there was a decline of 23 (79\%) unfavourable responses to question 11, while in Group N, the decline was 17 (62\%). But recall that this question required pupils to guess at their teachers' opinions, and that the two groups had different teachers. This might account for the observed divergence.

Using Table 7 now, to compare conditional proportions of unfavourable responses to the test questions (no.'s 1, 2, 4, 5, 6, 7, 8, 9, 10, 11) between the two groups from the first to the second week, we obtain a value of 7.5788 for $\chi^2$, with nine degrees of freedom. This gives a significance level of .577, from which it appears that we can be not much more than 40\% confident that the students in the two groups showed significantly different tendencies to change unfavourable opinions.

The aggregate of unfavourable replies to test questions shows a decline of 170 (31\%) from the first to the second week for Group N, and a decline of 159 (only 25\%) for Group M, as we can see from Table 9. The $\chi^2$ test, here, gives a significance level of .391 for these data: not a strong correlation. If it shows anything—which is doubtful—it shows that the pupils in the test group were more likely to change unfavourable opinions than were the pupils in the control group. That is, Group N's rate of 'natural amelioration' of opinion was higher than Group M's rate, and this despite the deteriorative pressure of Questionnaire II.
TABLE 9
AGGREGATE UNFAVOURABLE REPLIES OVER TEST QUESTIONS

<table>
<thead>
<tr>
<th>Group</th>
<th>Response Type</th>
<th>Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$U_1$ ( = B + D)</td>
<td>$U_4U_1$ ( = B)</td>
</tr>
<tr>
<td>M</td>
<td>625</td>
<td>466</td>
</tr>
<tr>
<td>N</td>
<td>548</td>
<td>378</td>
</tr>
<tr>
<td>Column Totals</td>
<td>1173</td>
<td>844</td>
</tr>
</tbody>
</table>

$\chi^2 = 7.373$
Number of degrees of freedom = 1
Level of significance = .391

Summary: Problem 1

In summary, every comparison which might have revealed a deteriorative effect on pupils' opinions due to the tendentiousness designed into Questionnaire II, yielded too poor a correlation to allow us to conclude that such an effect was indeed present. The pupils in Group N showed stronger propensities to maintain favourable opinions and to change unfavourable opinions, than the pupils in Group M did, and the best correlations—though they are none too good—support this. We cannot conclude, then, with any reasonable degree of confidence, that the rephrasing of questions on Questionnaire II had any effect at all.
Analysis of Problem 2

Recall now the second problem:

How strongly are children's attitudes affected by those of their parents and teachers, or by what children may imagine them to be?

For this, the separation of pupils into Groups M and N was retained--because the groups had different teachers--and the frequencies of favourable replies to Questionnaire I in the first week of testing, were used. The statements which might be expected best to have revealed the attitudes under consideration are:

1. This is a good painting;
2. I like this painting;
7. This picture makes me feel good;
10. My parents would like this picture;
11. My teacher likes this picture.

Statements 1, 2, and 7 were included as indicators of the pupils' self-consistency, as a standard against which to measure similarity of response, and as a means to broaden the base of the comparison.

The statements were studied in pairs, and the frequency of favourable (F) responses to each painting compared, for each pair of statements. The \( \chi^2 \) test showed significance levels above .9 for every pair (i.e., it showed that any difference between responses to any pair of statements over the twenty paintings is approximately 90% likely to have occurred by chance, and such differences are not significant), which suggests that, for the purposes of Problem 2, the \( \chi^2 \) test was not sufficiently sensitive.
We therefore converted the F frequencies to percentages—ratios of observed to possible favourable replies—so that the behaviour of the two groups might be more directly comparable. Then we averaged the absolute differences in F percentage between each pair of statements over the twenty paintings. This was done for each group. The sample deviation for each average was computed, and paintings with F percentage differences beyond one deviation from the mean, recorded. The findings appear in Table 10.1 A detailed discussion of the outstanding results follows.

Questions 1 and 2

For Group N, the two statements which 'fit together' best (i.e., had the smallest dissimilarity of response) were Q1 and Q2 ('This is a good painting and I like it'), Q1 being answered, on the average, more favourably than Q2. Identical reaction patterns to the two questions were obtained for eight paintings. There was no significant response of the sort, 'I like this painting, but I think it's bad,' however, between 22% and 33% of the Group N students said, in effect, 'This is a good painting, but I don't like it,' with regard to paintings 3, 9, 10, 14, and 20.

For Group N, the fit was not very close on these statements, with Q1 again being answered more favourably than Q2. Only five paintings showed the same response pattern. A significant proportion—29% to 43%—said, 'This is a good painting, but I don't like it,' with regard to paintings 9, 13, and 16, and 29% of the pupils said,

---

1Infra, p. 38.
'This is not a good painting, but I like it,' with reference to paintings 5 and 20.

There is an apparent inconsistency here, if one believes that, to be consistent, one must like all things and only those things, that one thinks are good. Indeed, later discussions with Group N seem to indicate that this belief was quite common among its members. On the other hand, discussions with the children in Group M suggest that they took a somewhat more sophisticated view, finding no logical difficulty in distinguishing between affection and judgement—whatever problems they may have encountered in expressing such a distinction.

Thus, the pupils in Group N were less 'consistent'—in the above sense—than the pupils in Group M, yet they were more apt to insist on the need for such 'consistency'. This might be a reflection of the fact that Group N was slightly younger, on the average, than Group M, and hence, possibly more immature.

Questions 1 and 7

The most marked dissimilarity of response between the two groups showed up on Q1 and Q7 ('This is a good painting: it makes me feel good.'), with Q1 being answered considerably more favourably than Q7, in both cases. The 'fit'—the average percentage difference in favourable replies to these questions—was very poor for Group N, but about average for Group N. Identical replies to the questions

1 See Appendix C.
were obtained by only one painting (no. 4) from Group M, and by six from Group N.

In neither group was there a significant response of the sort, 'This is a bad painting, but it makes me feel good.' However, between 56\% and 67\% of pupils in Group M said, 'This is a good painting, but it doesn't make me feel good,' with reference to five paintings (no.'s 9, 10, 12, 16, 20), and 57\% of pupils in Group N said the same thing with reference to paintings 3 and 9.

Questions 2 and 7

The 'fit' between these two statements ('I like this painting: it makes me feel good.') was on the poor side for Group M and on the good side for Group N, although nothing outstanding in either case.

Questions 1, 2, and 7

In general, Group M seem to have had more confidence in their judgement than Group N did, they seem to have shown a greater capacity for the formation of disinterested opinion, and to have been much less apt to allow emotional engagement with a painting to determine their attitude towards it, to have exhibited, in short, more objectivity than the younger group.

Questions 1, 10, and 11

For Group M, the 'fit between Q1 and Q11 ('This is a good painting and my teacher likes it.') was very good, with Q1 being answered somewhat more favourably than Q11. Between Q1 and Q10
'This is a good painting and my parents would like it.'), the fit was quite poor: Q1 received about 30% more favourable replies than Q10.

For Group N, the fit between Q1 and Q11 was slightly poorer than average—Q1 receiving more favourable answers than Q11—however, questions Q1 and Q10 exhibited the greatest response dissimilarity of all pairs considered, a difference of some 20% in favour of Q1.

Between 44% and 56% of pupils in Group M said, 'This is a good painting, but my parents wouldn't like it,' with reference to each of five paintings (no.'s 1, 3, 10, 14, 20), and 43% of pupils in Group N said the same about paintings 5 and 19.

Only one painting (no. 17) generated similar responses to Q1 and Q10 in Group M, and only three (no.'s 2, 5, 7) in Group N. Q1 and Q11 received identically favourable reactions on eight paintings from Group M, and on five from Group N.

With reference to only two paintings (no.'s 10 and 20 in Group M, no.'s 9 and 19 in Group N) did a significant number of students (33% in Group M, 43% in Group N) say, 'This is a good painting, but my teacher doesn't like it.' And the statement, 'This is not a good painting, but my teacher likes it,' was applied by a significant number of pupils (33% to 44% in Group M, 43% in Group N) only to painting 2 (Groups M and N) and to painting 17 (Group M).

Whether, in actual fact, the pupils' judgements of quality were influenced by their parents' likes and dislikes, it cannot be argued on the basis of the evidence presented here, that the pupils
felt this to be so. Rather the contrary. The children appeared to believe that there were many good paintings in the exhibition which their parents would dislike—though it is interesting to note that the children did not fix on any 'bad' paintings (bad, in their opinion) which they thought their parents would like. Incautiously, one might suggest that the children were willing to impute to their parents the absence of good taste, but that they hesitated to charge them with the presence of bad.

The teachers did less well in this respect: a good proportion of pupils seem to have believed that their teachers liked the 'bad paintings' no.'s 2 and 17. Otherwise, the teachers fared better than the parents. There was a much closer agreement between what the children thought was good, and what they imagined their teachers would like.\(^1\) We will see\(^2\) however, that there was no close correlation between what the students thought their teachers would like, and what the teachers actually liked. Moreover, the evidence available gives little clue to the logical mechanism at work. We cannot know, for example, whether the students reasoned, in general, 'This is a good painting, therefore my teacher must like it,' or, 'I'm sure my teacher likes this painting, therefore it must be good.' Thus, any conclusion we may wish to draw about which opinion influenced the other, would be conjectural.

\(^1\) See also Appendix D.

\(^2\) Infra, p. 39.
Questions 2, 10, and 11

Group M performed most nearly like Group N on Q2 and Q11 ('I like this painting, and so does my teacher.'), although the paintings which elicited identical responses (no.'s 1, 5, 10 from Group M; no.'s 1, 6, 9, 10, 11, 12, 15, 20 from Group N) were quite different. Once more, the fit between the student - teacher questions (Q2 and Q11) was better than it was between the student - parent questions (Q2 and Q10: 'I like this painting, and so do my parents.'), and in the case of Group M, it was considerably better.

Questions 7, 10, and 11

For these questions, there was a sharp reversal of form. The replies to Q7 and Q10 ('This painting makes me feel good and my parents would like it.') exhibited very close agreement in both groups. The replies to Q7 and Q11 ('This painting makes me feel good and my teacher likes it.') were very dissimilar to each other.

Questions 10 and 11

The fit between these questions ('Both my teacher and my parents would like this painting.') was on the poor side, with the teachers supposed by their pupils to have been much more favourably disposed to the paintings than the parents were.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Difference In Z of F's (Ranked)</th>
<th>Sample Deviation (Ranked)</th>
<th>Paintings for Which Qm &gt;&gt; Qn In Z of F's</th>
<th>Paintings for Which Qm ≡ Qn In Z of F's</th>
<th>Paintings for Which Qm &lt;&lt; Qn In Z of F's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 &amp; Q2</td>
<td>10.56 (1) 15.00 (4) 11.11 (2) 11.86 (2)</td>
<td>3.9, 10.14, 20 9.13, 16</td>
<td>1.2, 4.5, 8, 12, 15, 18 2.7, 8, 11, 14</td>
<td>5, 20</td>
<td></td>
</tr>
<tr>
<td>Q2 &amp; Q7</td>
<td>26.87 (6) 14.29 (3) 16.67 (7) 13.86 (7)</td>
<td>1.2, 5.8, 12, 16 3.5, 13</td>
<td>4.7, 13 2.4, 7, 8, 10, 18, 19</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Q1 &amp; Q7</td>
<td>33.89 (9) 17.86 (7) 20.56 (9) 17.29 (10) 9.10, 12, 16, 20 3.9</td>
<td>4</td>
<td>2.6, 7, 8, 16, 17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 &amp; Q10</td>
<td>28.33 (7) 20.71 (10) 14.22 (6) 12.71 (5) 1.3, 10.14, 20 15, 19</td>
<td>17</td>
<td>2.5, 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2 &amp; Q10</td>
<td>22.22 (5) 15.71 (5) 10.78 (1) 13.00 (6) 1.2, 6.15, 18, 20 5.6, 11.14, 15, 19</td>
<td>20</td>
<td>13</td>
<td>2.4, 7, 16, 17, 18</td>
<td></td>
</tr>
<tr>
<td>Q7 &amp; Q10</td>
<td>14.44 (3) 11.43 (1) 12.56 (4) 11.86 (5)</td>
<td>10, 19, 20 1.3, 11.13, 20 1.2, 4.7, 11, 12, 13, 14, 16</td>
<td>8.9, 12</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Q1 &amp; Q11</td>
<td>12.78 (2) 16.43 (6) 14.11 (5) 14.14 (8) 10, 20</td>
<td>9.19 1.3, 5.6, 7, 9, 14</td>
<td>16</td>
<td>3.4, 5.11, 18</td>
<td>2.17</td>
</tr>
<tr>
<td>Q2 &amp; Q11</td>
<td>16.67 (4) 14.29 (2) 11.67 (3) 14.71 (9)</td>
<td>5.8, 17, 19 1.5, 10</td>
<td>1.6, 9, 10, 11</td>
<td>2.9, 13</td>
<td>2.13</td>
</tr>
<tr>
<td>Q7 &amp; Q11</td>
<td>35.56 (10) 20.00 (9) 22.44 (10) 12.57 (4)</td>
<td>11 10</td>
<td>2, 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q10 &amp; Q11</td>
<td>28.89 (8) 20.00 (8) 18.22 (8) 11.71 (3)</td>
<td>11, 12</td>
<td>5, 19</td>
<td>2</td>
<td>2.20</td>
</tr>
</tbody>
</table>
Observations on Guessing

Before concluding the analysis of Problem 2, let us assess the pupils' accuracy in guessing their teachers' opinions of the work in the exhibition. Each of the teachers later provided a rough ranking of the paintings (in declining order of merit) according to her judgement. Each list was divided arbitrarily in the middle. Those paintings to the left of the division were classed as being 'favourably'-received by each teacher, those to the right as being 'unfavourably' received. Under each painting number in the ranking was recorded the frequency of F or U replies which that painting received to question 11, according as the painting fell in the first or last half of the ranking, respectively. These results appear in Tables 11M and 11N.

TABLE 11M

<table>
<thead>
<tr>
<th>Paintings Favourably Received</th>
<th>1 17 12 8 9 4 20 18 19 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>F Replies to Question 11</td>
<td>9 9 7 9 8 8 6 8 8 6</td>
</tr>
<tr>
<td>Paintings Unfavourably Received</td>
<td>2 16 5 15 10 7 14 13 3 6</td>
</tr>
<tr>
<td>U Replies to Question 11</td>
<td>0 0 1 2 3 1 2 5 1 2</td>
</tr>
</tbody>
</table>
TABLE 11N
PAINTINGS RANKED BY TEACHER N
IN DECLINING ORDER OF MERIT

<table>
<thead>
<tr>
<th>Paintings Favourably Received</th>
<th>10 12 7 16 18 9 13 4 1 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>F Replies to Question 11</td>
<td>6 6 6 5 7 4 5 7 3 3</td>
</tr>
<tr>
<td>Paintings Unfavourably Received</td>
<td>17 15 2 3 20 5 19 6 8 14</td>
</tr>
<tr>
<td>U Replies to Question 11</td>
<td>4 4 4 1 0 2 5 2 3 2</td>
</tr>
</tbody>
</table>

In order to determine whether these results showed evidence of 'intelligent' guessing, we compared them with the results which would have been obtained by blind, but prejudiced, guessing, taking as an index of the prejudice, the quotient of the actual number of F replies to question 11 (summed over the twenty paintings) by the possible number of F's. That is, we conjectured that an arbitrary student in Group M was approximately $151/180 = 83.89\%$ likely to decide that his teacher liked an arbitrary painting, and approximately $29/180 = 16.11\%$ likely to decide that his teacher disliked it. For Group N, the conjectured probabilities were $95/140 = 67.86\%$ in favour of an F answer to question 11 (for an arbitrary painting), and $45/140 = 32.14\%$ in favour of a U answer. The F-expectation, then, for Group M was about 7.5 per painting, and for Group N, it was about 4.75 per painting. The U-expectation for Group M was about 1.5 per painting, and for Group N, about 2.25 per painting. Then starting at opposite ends of each ranking, we considered the possibilities
that the teachers liked the first 2n paintings, disliked the last 2n (for n=1,2,3,4,5), and were indifferent to the rest. The observed results are compared with the conjectured results in Table 12. The comparisons exhibit significance levels varying from about .43 (Group M, n=3) at best, to about .87 (Group N, n=1) at worst. That is, the probabilities of such patterns occurring by chance varied from about 43% to about 87%. Group M were slightly luckier in their guessing than Group N, however, all observed results are entirely consistent with blind, but prejudiced, guessing.

Later discussions with the pupils\(^1\) tend to confirm this, although in some cases—especially from Group M—the clues the pupils looked for were quite subtle (if mistaken).

The parents were, unfortunately, unavailable for testing, so we cannot know whether the children were better at guessing their parents' tastes than they were at guessing their teachers'. However, the discussions\(^2\) give some evidence of the way the children assess their parents: parents are neater than children and less imaginative (Group M); parents are less creative than children and more experienced (Group N).

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\(^1\)See Appendix D.

\(^2\)See Appendix E.
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Summary: Problem 2

We conclude the examination of Problem 2 with the following observations:

The pupils were unlikely to have been influenced by the real opinions of their teachers, because there is no evidence to show that they knew, or could guess accurately, what these were. It was impossible to determine whether the children were influenced by the real opinions of their parents, because the parents were unavailable for testing. For the equally important question, whether the pupils felt themselves to have been influenced, it is possible to draw some negative conclusions with a fair degree of confidence, but no positive ones. First, the negative conclusions. We can be reasonably sure that the pupils did not feel influenced affectively by their teachers, because the response patterns to questions 7 and 11 ('This painting makes me feel good, and my teacher likes it.') were quite widely divergent. Similarly, we can conclude with fair certainty that the children did not feel influenced judgementally by their parents, because the response patterns to questions 1 and 10 ('This is a good painting, and my parents would like it.') were also widely divergent. The response patterns to questions 1 and 11 ('This is a good painting, and my teacher likes it.') and to questions 7 and 10 ('This painting makes me feel good, and my parents would like it.') were convergent, but we cannot conclude on that account alone, that the pupils felt judgementally influenced by their teachers,
or affectively influenced by their parents. The machinery of 
profound influence is hidden from us; we can be reasonably sure 
when it is absent, but we cannot know when it is present. If the 
pupils really felt influenced in these ways, then we should expect 
to find similar response patterns to the above pairs of questions. 
But the mere presence of similar response patterns does not enable 
us to conclude that any influence mechanism was at work.

Analysis of Problem 3

We arrive now at Problem 3, the pedagogical problem:

To develop a questionnaire for classroom use which will show us 
what kind of art the pupils really like, which will add structure 
to gallery visits and serve as a basis for art appreciation dis-
cussions, which will supply a procedure enabling us to tailor our 
art curriculum to the specific groups with which we work.

For reference, the frequencies of favourable replies by the two groups 
to Questionnaire I are collected in Tables 13 and 14. These tables 
contain all the information we need, however they may appear inconclusive, 
and hard to interpret, especially to a busy teacher. What is needed, 
is some device to amplify the results, so that decision and inter-
pretations may be made almost at a glance. To this end, we take means and 
deviations across rows and down columns, and record in separate tables--
no.'s 15R, 15C (Group M), and no.'s 16R, 16C (Group N)--the number and 
kind of deviation from row and column means, respectively, of each 
entry from Tables 13 and 14. The total number of deviations for each 
painting (Table 15R, 16R) and each question (Tables 15C, 16C), are 
than collected into frequency histograms, Graphs 1R, 1C (Group M), 
and Graphs 2R, 2C (Group N).
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TABLE 15R
ROW MEAN DEVIATIONS
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TABLE 15C

COLUMN MEAN DEVIATIONS

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Graph 18. Aggregate deviations from row means: Group M (Tables 13, 15R)

Painting Number

1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20

Aggregate Deviation

-17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
Graph IC. Aggregate deviations from column means: Group M (Tables 13, 15C)

Question Number

1  2  3  4  5  6  7  8  9  10  11  12

Aggregate Deviation
Graph 2B. Aggregate deviations from row means: Group II (Tables 14, 16R)

Painting Number

1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20
Graph 2C. Aggregate deviations from column means: Group N (Tables 14, 16C)

Question Number

1 2 3 4 5 6 7 8 9 10 11 12

Aggregate Deviation
We should warn that there can be no amplification without distortion: the greater the amplification, the greater the distortion. Therefore, these histograms should be regarded as indicators of strong opinion, not as faithful representations of it. Moreover, any teacher employing graphs such as these must understand that the final responsibility for analyzing class taste, belongs to the teacher. Emphasis placed on any extreme views revealed by the tests, is up to the individual. In other words, no comprehensive 'key' to the graphs, no decision procedure, no automatic interpretive routine, is provided here, nor should be. There are too many variables involved, and too many possible combinations of strong reaction to test questions and paintings, alike. Nonetheless, with the type of information which the histograms reveal, one does know something about the kind of taste one's students possess, and one can base one's plans upon it.

In Graph 1R (Group M), we concentrate on the extremes above and below the mean. Notice that painting no. 4 (Colorado Landscape) was the best-liked painting, followed by paintings no. 18 (BMW Showroom), and no. 12 (Baroque Chapel). Referring to the slide collection, we see that no. 4 is a subtly-tinted oil painting with much attention to the technique of applying paint to canvas. This complex painting invites the viewer to see far into the picture as if through some fantastic arched window. The Baroque Chapel, painting no. 5, again lifts the viewer into dizzy spaces beyond the surface of the

1 Appendix A.
painting. From these straightforward cues, one might be tempted, in future art classes with Group N, to work on colour mixture and the rendering of detail in painting. One might introduce some study of perspective and discuss the use of optical illusions in art.

Nowhere is there any indication that the human figure plays a part in these children's appreciation of art, for painting no. 20 (Narsha D) aroused very little interest, even though the pupils might have considered rewarding it for technical merit. Note that the only other figure represented in this show, painting no. 13 (The Ornithologist), was the most unpopular of all, which one might be tempted to attribute to the onset of puberty in most of the students in Group N. The strong revulsion for painting no. 13 might suggest that Group N's teacher gently introduce the nude in art history discussions, beginning, for example, with the more agreeable nudity in Fragonard, Botticelli, and Renoir. As students come to find this acceptable, they could be led gradually to the idea that the human figure need not be 'pretty' to render it suitable subject material for art.

The overwhelming dislike of painting no. 2 (Untitled), a totally black, and very large work, could prompt the teacher of this group to include the use of dark tones in their study of colour. The evolution of Ad Reinhardt as a painter might be discussed, along with his statements regarding the use of black in his work.

The teacher of the younger class (Group N) will see from Graph 2B that painting no. 7 (Large Salad) earned the most approval.
Paintings no. 18 (BMW Showroom) and no. 20 (Marsha D) were liked almost as well, and tied for second place. Painting no. 4 (Colorado Landscape) came third—compare its undisputed first place in Group M's evaluations.

On the other side of the mean, Group N's disapproval exceeded Group M's of the totally black painting, no. 2 (untitled), which won the prize as the most 'inferior' painting in the show. From Table 14, we find that unfavourable answers were elicited by almost all questions asked about this painting. In particular, the 100% unfavourable response to the statement, 'This painter uses good colours,' was more than three deviations below the mean of about 72% favourable replies (averaged over all the paintings, Table 16A). The clue here appears to be the colour black. But the other even larger and almost black painting, no. 17 (AZ-72), was not disliked to anywhere near the same degree. Thus, colour alone does not determine how a child pronounces a verdict on a painting. Some realistic reference or content in a black painting can neutralize the subjective impact of the colour used alone. This guess is further strengthened by Group N's 70% favourable response (averaged over all questions) to painting no. 8 (Dunharrow), which contains much detail in a brooding landscape, painstakingly done in deep tones, with a near absence of readily-identifiable hues. Perhaps Group N's art appreciation discussions should include mention of chiaroscuro painters, such as Caravaggio or Georges de la Tour. Paul Klee's Carnival in the Mountains and Landscape with Yellow Birds are other possibilities.
Group N rewarded the nearly photographic paintings: no. 4 (Colorado Landscape), no. 7 (Large Salad), no. 18 (BMW Showroom), and no. 20 (Marsha D), which might suggest the use of film, shadowgrams, or flip-books for these children. But painting no. 10 (Dairy Bull (without horns)) was the most photo-perfect and in-focus painting of all, yet the technique of super-realism did not rate as high here as it seemed to in the case of other pictures which might be placed in the same category.

Thus Group N seems to have responded favourably to quality of execution and perfect attention to detail, but not invariably so. Some subject matter (Dairy Bull) is not as pleasing as some other (salad, cars, panty ads) when figuring centrally in a painting, no matter how 'difficult' these subjects seem to be to paint.

Moreover, it appears that paintings employing some childish or maladroit handling of brush and paint, are definitely frowned upon. Note that painting no. 15 (Moonshine) is the second-most disapproved-of painting, perhaps suggesting to these children pre-school-days-gone-by. Painting no. 11 (Magnolia) was the third most disliked painting, perhaps due to the artist having left one-quarter of the canvas exposed, producing an in-progress feeling to this picture.

The question histograms (Graphs 1C and 2C) show that, for both groups, Questions no. 1 ('This is a good painting.'), no. 5 ('This painter uses good colours.'), and no. 11 ('My teacher likes this picture.') scored consistently higher in favourable replies than any others. Questions 1 and 11 have been analyzed above.
Question 5 suggests that, for both groups of children, colour was the single most important factor in favourable response determination. On the other hand, Question 12 ('I would pay one year's allowance for this picture.') scored incomparably lowest in both groups; Question 8 ('I would like to have this picture at home in my room.') was also well below average (possibly by association with Question 12). Such an undifferentiated negative response pattern suggests that Question 12 might profitably be dropped from the questionnaire in future applications of the test: it tells us more what value children place upon money than what value they place upon art, and is, in any case, unrealistic. Question 7 ('This picture makes me feel good.') scored low in Group M, ambiguously in Group N, from which the teacher might conclude that the pupils in the older age-group (Group M) have a less uncertain attitude to the affective properties of art than the younger children do. And Question 9 ('This artist is doing the best work he can.') scored low in Group N, ambiguously in Group M, which might tell the teacher that the older children recognized better than the younger, that this was a difficult question to answer.

The painting histograms (Graphs 1R and 2R) and the question histograms (Graphs 1C and 2C), therefore, should be used in conjunction: the first, as indicators of children's tastes and attitudes, the second as indicators of the relative maturity and sophistication of these tastes and attitudes.
Test Conclusions

We list once more the problems which the test was designed to study, and summarize the results of the test analysis.

1. To what degree are children's opinions of works of art governed by the way in which critical or evaluative statements are phrased? In particular, do remarks about paintings which invite a favourable response induce measurably different opinions, from remarks which invite an unfavourable response?

No significant evidence was found to support a conclusion that the phrasing of a question governed the answer it received from the students taking part in the test. In fact, there were weak indications that remarks designed to evoke unfavourable responses had the opposite effect, that the students perhaps noticed the attempt to manipulate their opinions, and resisted it so strongly that they replied more favourably to the negatively-phrased remarks than they had to the positively-phrased ones.

2. How strongly are children's attitudes affected by those of their parents and teachers, or by what children may imagine them to be?

The parents were unavailable for testing, so it was impossible to determine whether the children were influenced by their parents' actual attitudes. It was found that the children were unable to tell what their teachers' opinions and tastes actually were, or rather, it was found that the children did not do significantly better at this, than if they had been guessing blindly. Therefore, we cannot conclude that these children were influenced by their teachers' actual attitudes, because there is no significant evidence to show that the
pupils knew what these were. For the more subtle question, were the students influenced by their parents' and teachers' imagined attitudes, we can offer some fairly confident conclusions and some very cautious conjectures. First, the conclusions. The children were probably not influenced judgmentally by what they imagined their parents' attitudes to be, nor were they likely to have been influenced affectively by what they imagined their teachers' attitudes to be— their responses to certain key questions, designed to reveal such influence, were too dissimilar. Next, the conjectures. The children were possibly influenced affectively by what they thought their parents would like, and judgmentally by what they thought their teachers would like—their responses to questions designed to indicate such influence were very similar, but mere similarity of response does not reveal a causative factor.

3. To develop a questionnaire for classroom use which will show us what kind of art the pupils really like, which will add structure to gallery visits and serve as a basis for art appreciation discussions, which will supply a procedure enabling us to tailor our art curriculum to the specific groups with which we work.

The questionnaire is Questionnaire I--minus question 12--with strong deviation frequency histograms of favourable replies, averaged over both paintings (row means) and questions (column means). The actual decision procedure is left up to the individual teacher, although suggested model interpretations are supplied. Techniques for using the questionnaire are described in the next chapter. It was found that the most popular works were those which exhibited extraordinary technical painting skills combined with ordinary, often familiar subject
matter. Everything had to be clearly in focus, with traditional perspective, and leaving no disturbing thoughts in the imagination. The paintings which elicited strong disapproval exhibited variously: extreme subtlety of value in the use of colour, the overwhelming presence of black, the unbowedlerized presentation of the nude, highly textured use of cloth, beads, etc., 'childish' or 'messy' techniques—i.e., techniques imitative of very young children.
CHAPTER III

CONCLUSION AND RECOMMENDATIONS

The tendency in elementary school in the present and the recent past has been towards the learn-by-doing side of art. The education of taste is correspondingly neglected or postponed to an indefinite future, when students' maturity and grasp of language is putatively greater. However, it is not a poor grasp of language that prevents the adolescent and post-adolescent student--whether he be 'mature' or not--from forming confident opinions about art. It is rather a set of inhibitions, learned over the years, which replace childhood candour with apathetic philistinism, or with harried eagerness to agree with endorsed opinion. And elementary school art teachers are by no means themselves immune. Indeed, more than most people, they may feel the need for such protective inhibitions, and this may account for their frequent reluctance to venture into regions ungoverned by conventional wisdom.

But a lack of critical 'nerve' is evidence of a deficient art education--the converse is not necessarily true, of course--and there is no good reason that young students should be inoculated with the same deficiency by being denied early experiences in art evaluation. The child is at one end of a hierarchy of art critics, but not necessarily at the most disadvantageous one. For as we have seen, the child has few problems in reacting to art, or in judging it: he makes little distinction between traditional and contemporary art (beyond the obvious distinction between representational and
non-representational techniques); he is not afraid to be 'wrong';
he does not feel the need to consult expert opinion before formulating
his own; he does not worry if his interpretations are phrased in
appropriate art jargon; he does not attend vernissages, nor is he
invited—a fate he shares with most elementary school art teachers.

It is naive to hope that art teachers be artists—or art critics, for that matter. It is naive even to hope that the element-
ary school teacher might have had any formal training in plastic
art. Nor is such a teacher likely to take time to remedy the situation
or to 'improve' herself by scouring the Saturday press for art reviews.
Indeed, she may find the opinions expressed there suspect, when they
are not unintelligible. And many artists would agree: not the least,
whichever artist has produced the work under review.

But it is precisely this distrust of the written word in art,
the spoken word in art, and the critical process in art, which pro-
duces an artistically illiterate public, and obliges us, as educators,
to attempt to modify the common denominators of popular taste in future
generations. The importance of this cannot be too strongly pressed:
one need only consider how many adults rely quite slavishly on the
judgement of others—interior decorators, architects, fashion designers,
hairstylists, cosmetics, and 'estheticians', disc jockeys, to name
very few—at every point in their lives where an aesthetic decision
must be made, and with what results!

One has no difficulty understanding why so many teachers feel
that the practical side of art is more respectable—not to say, safer—
than the analytical side, nor why they place such heavy reliance on standard bags of tricks--puppets, masks, 'black magic' drawing, paper weaving, etc., etc.--tricks which guarantee both teacher and student instant (not to say, easy) success.

One mentions bags of tricks not merely to deplore them (though one does deplore them), for one suspects that, like the poor, they are always with us. But if teachers must use bags of tricks, let the tricks at least be good ones! It is our purpose to recommend the test outlined in this paper as one of these, but with this difference: the teaching device presented here does not save thinking, it stimulates it. Its advantage over the usual procedure is that the child begins immediately to respond, to evaluate, and to make definite committed decisions about the art he sees, all without any prepared point of view. He is obliged to apply thought processes already familiar to him, but in unfamiliar ways.

The test may be applied in conjunction with any collection of slides or reproductions, or with any gallery visit. But if the last alternative is chosen, the teacher should take care to secure a good set of photographs of the paintings, to be used later in the classroom. For ordinary pedagogical purposes, only Questionnaire I need be employed--with Question 12 excised. The whole analytical process might easily be computerized, in which case, the teacher's only necessary contribution would be the transference of results from the pupils' answer booklets onto OPSCAN sheets, using the assignment of values given on pages 13-14 above. To avoid 'deep waffa', only
the techniques of Problem 3 need be applied, and the computer, programmed to produce Tables 13, 15B, 15C, and Graphs 18 and 1C. If a computer is unavailable, the same results may be obtained as the author obtained them, by two or three hours' work with a calculator. Inspection of the graphs and comparison of outstanding results with the collection of photographs or reproductions, should then provide the teacher with enough material for some very relevant art appreciation discussions. And if the teacher is a reasonably flexible person, it should also suggest ways to design a curriculum which will reinforce success, not disaster. But even if the teacher is inflexible, it might tell her which tricks to pull out of her bag, and which ones to leave behind.

This method of structuring gallery visits, for example, eliminates the usual disruptive mind wandering and mental blocking which occur when the teacher attempts to deliver prepared comments to a large and intractable group of children in strange surroundings. If the teacher invites comments from such a group, only a small proportion are usually motivated enough to engage in the discussion, and the opinions expressed are often 'group opinions'. One can easily imagine the less confident student rejecting his own feelings or conclusions about a painting, in favour of something more popular—especially if he is in strong disagreement with it!

The sequence is now more logical and more pedagogically sound. Traditional gallery visit: (1) Talk by teacher; (2) Visit to gallery

\textit{Supra}, pp. 43, 49, 50, 53, 54, respectively.
and more talk by teacher; (3) Back to classroom and more talk by teacher.

Proposed gallery visit: (1) Pupils look at paintings and judge them via the quiet test; (2) Teacher analyzes results in pupils' absence; (3) Teacher and pupils discuss paintings on the basis of likes and dislikes shown in the test; (4) Not absolutely essential, but better--return visit to gallery to fix images in pupils' minds; (5) Follow-up art classes based on pupils' preferences.

The test, as we have outlined it above, is very flexible. It is adaptable to practically any material the teacher may have on hand: slides, photographs, reproductions, temporary shows, permanent collections, even exhibitions of the students' own work--though some care should be taken here not to wound feelings. The questions themselves may be modified to reveal attitudes of special interest to the teacher. The test has no right or wrong answers, it has no answers better than others, and for this reason, there is no danger of the teacher misusing it to grade pupils. It imposes no external standards and refers to none. It does not distinguish 'talented' students from 'untalented' ones, i.e., it is neither overtly nor covertly an IQ test. The students are treated as a group at all points. In these respects it differs from all other art tests the author has been able to examine. And finally, it cannot become outdated because, except for the arbitrary selection of viewing material, its references are all internal.
APPENDIX A

Descriptions and Slides
Of Paintings Used
In the Test
Descriptions and Slides
Of Paintings Used
In the Test

The paintings were drawn from an exhibition at the Saidye Bronfman Centre, Montreal, titled New York Avant-Garde 74, which opened 1 December 1973. The catalogue descriptions follow.

1. William CANVAN-TUCKER, ' Untitled '; oil on canvas, 75" x 86" ($1,200).
2. Bob Moskowitz, ' Untitled '; acrylic on canvas, 90" x 75" ($2,000).
3. Ralph Humphrey, ' Untitled '; acrylic on canvas, 65" x 66" ($4,000).
4. Cynthia Carlsson, ' Colorado Landscape '; oil on canvas, 48" x 67" ($500).
5. Robert Duran, ' A. Nivakly '; liquitex on canvas, 80" x 95" ($3,500).
6. Michael Tetherow, ' Untitled '; acrylic on canvas, 108" x 72" ($2,000).
7. Ben Schonzeit, ' Large Salad '; acrylic on canvas, 72" x 60" (N.F.S.).
8. Stephen B. Woodburn, ' Dunharrow '; acrylic on canvas, 66" x 89 3/4" ($4,000).
9. H. S. Han, ' Riverfront Industrial Scene '; acrylic on canvas, 44" x 66" ($1800).
10. Ben Schonzeit, ' Dairy Bull (without horns) '; acrylic on canvas, 60" x 42" (N.F.S.).
11. Robert Zakanych, ' Magnolia '; acrylic on canvas, 7" x 12" ($4,000).
13. Susan Hall, ' The Ornithologist '; acrylic on canvas, 72" x 62" ($1,500).
15. Joan Snyder, ' Moonshine for D, L & N '; oil and acrylic on canvas, 60" x 163" ($5,500).
16. Alan Stiegel, 'Hover'; acrylic on canvas, 9' x 6' ($1,500).

17. Lynton Wells, 'AX72'; photosensitive linen, acrylic, 78" x 166" ($5,000).

18. Don Kiddy, 'BMW Showroom Window'; acrylic on canvas, 99" x 96" (N.F.S.).

19. Alan Shields, 'Poems Needed'; acrylic, thread, wood, beads on cotton, 80" x 110" ($n,500).

20. John Kavanaugh, 'Maraha D'; oil on canvas; 55" x 81" (Collection: Reiner Family, Maryland, N.F.S.).
VIDEO PORTIONS OF THIS THESIS, LEAF 73,
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APPENDICES B - E

Abridged Transcripts of Discussions

With Students Subsequent to Tests
Abridged Transcripts of Discussions
With Students Subsequent to Tests
Appendix B
Group M

Teacher: Why did you change your minds the second time around?

Student 1: I did not.

Student 2: Because you have different feelings about the picture.

Student 3: Or you forgot the other answers and you realize how good the picture is.

Student 4: If you're in a different mood that day.

Student 5: And if you didn't memorize your other answers.

Student 3: You'd have more time to think about it this time.

Student 2: Well, another time you can look at the picture and see something that you didn't see last time on the picture, and you can decide you like it.

Student 1: You have a second thought.

Student 6: Like we can say that we don't like the picture the first time that we go to the art gallery. The second time we may change our minds.

Student 2: You have different thoughts, and you have a second chance to think about it, and you know...

Student 1: You might not have realized what the picture really was.

Student 3: At first glance you just get to look at the picture for a little while, but then, when you get to look at it for a second time, it might appear different.
Appendix B
Group N

**Teacher:** Why did some of you change your minds on the second test?

**Student 2:** Oh, because of the mood I was in. I was in a different mood that day.

**Student 3:** What second test?

**Student 5:** The pictures looked different. You saw different things the second time.

**Teacher:** You saw different things. Okay. Susan?

**Student 3:** What second test?
Appendix C
Group M

Teacher: Why is it that a person can like a painting that he thinks is bad?

Student 1: Because he likes the style, but he doesn't think it's good. It's hard to explain.

Student 2: He might like the colours or the texture, but he might not like the design or the shape, or whatever. He might like the colours and design, except he just might not like what it is.

Student 3: He might think that the artist didn't do as good a job as he could have, but he still could like the picture.

Student 4: Like, he likes what it is—like, what it came out to be—but what's in it, he wouldn't like. I mean, he could like what's in the picture, and like what it is, what it came out to be, like anything—the object.

Student 6: Well, he likes the picture, but he doesn't like the colours. He may like the colours and he may not like the form of the colours.

Student 7: He might like the style and everything, but he might not like the way the artist put the colours together, or something like that.

Student 8: He might not like the picture, but the look of it, the feeling of it, makes him like it.

Teacher: Why is it possible to dislike something you think is good?

Student 6: Well, you could like something like Fanny Dooley on Zoom, and dislike it.

Student 2: Well, because you might like the picture, except the colours, and shape, and—blech!—you don't like it.

Student 1: The artist did a very good job and you don't like it.

Student 5: Well, you might like the colours, but you might not like the size of the painting, and the texture, and all that junk.
Student 3: That's what I was going to say.

Student 9: You might not like the painting, except you might, like, feel sorry for the artist because he put such good paper into it.

Appendix C

Group N

Teacher: Why is it that a person can like a painting that he thinks is bad?

Student 1: Everyone has a different opinion.

Student 2: Well, he can't. If someone likes it, he likes it, or he doesn't like it.

Student 3: That's weird.

Student 4: I think a person will either like a painting or he won't like a painting. It's like saying, what happens if a person likes a painting and doesn't like a painting, which is almost impossible to answer.

Student 2: He can't.

Student 4: He can't. It doesn't make sense.

Student 5: Because it's nice, but it's a bad painting.

Student 3: That's weird.

Student 4: I don't understand that.

Teacher: What don't you understand?

Student 4: I don't understand what you said.

Student 6: Oh! I know! Because sometimes, part of a painting is good, and some part is bad, for him.
Appendix D

Group M

Teacher: How do you know what your teacher likes?

Student 6: Oh well, like, if she takes a picture of a painting and she looks sort of happy, then you know she likes it. You can tell by her face, or you could tell by her, like, taking pictures.

Teacher: I took pictures of all of them.

Student 2: The pictures that she chooses she must like, or she wouldn't choose it. And also you don't know. Well, because you could tell when she smiled, you might think that she thinks it's good, and when she wants a good picture [photograph], she'll tell you to move out of the way, and so on and so forth.

Student 1: You have to know her type. If you know her personality, you'll know what she thinks.

Student 2: You can tell by the clothes she wears, and that she likes the colours.

Student 2: By her personality.

Student 3: Well, you'd probably have to be around her a lot, and know her, and know what she usually likes and what she usually doesn't like, like, if she likes to teach you about colour, then she'd like a colourful picture, maybe.

Student 2: Well, she tells you to move back, that means the wants a good picture [photograph], but if she tells you not to move back, then it means she doesn't care about it.

(The size of the painting determined at what distance the photograph was taken.)
Appendix D

Group H

Teacher: How do you know what your teacher likes?

Student 2: You don't.

Student 1: You don't. You guess.

Student 2: Because she's my teacher, and when she teaches us, she says different things, and then we know.

Student 3: Some of them that you thought were good, we said were terrible.

Teacher: Did I ever say which ones were good?

Student 1: No.

Teacher: Oh, then how did you know which ones I thought were good?

Student 1: You might have thought it.

Student 2: Yes, like, she tells you stories about what she likes, and, like, we compare notes, like, we tell each other what we like and what we don't like.

Teacher: Anybody else?

Student 2: No. Well, you sort of learn her opinion by what...by... the year goes on, and you learn her opinion by what she brings...what she's likely to do, and what work she likes mostly doing, if she likes to do a little bit of fun, if she likes to make a little bit of jokes, if she thinks when something is funny, she doesn't have to say, 'Oh, be quiet,' you can at least laugh, make that person feel a little good. That's what I think, still.

Student 1: What about me?

Teacher: Okay, what about you?

Student 2: When she gets books for you to read, she tells us what kind of stuff she likes.
Appendix E

Group N

Teacher: Is it easier for a kid to paint than for his parents?

Student 6: Well, no, because a kid can make a lot of mistakes, and a parent is very neat, he doesn't make... splattering on, and doesn't spatter all over the house, and all that.

Student 4: No, because most of the time children are more imaginative, and they have bigger imaginations.

Student 3: Some kids are better, and some parents are better. It all depends, like, you know.

Appendix E

Group N

Teacher: Is it easier for a kid to paint than for his parents?

Student 4: It depends if the parents have been brought up on painting, or have just started painting.

Student 4: Also, kids have lots of creative ideas, so they do, you know, lots of things.

Student 3: What was the question?

Teacher: Is it easier for a kid to paint than for his parents?

Student 3: Oh, ah, yeah, because the parents have more, um, what's that word?

Student 4: Experience?

Unidentifiable Student: Money?

Teacher: To paint, not to pay.

Student 2: Yeah?


Student 4: Well, not really. It's just as easy for both because his mother might have started at the same age, and they might be just as good... well, but otherwise, a parent could be better than a kid, in most cases because he's had more experience.
SELECT BIBLIOGRAPHY


Submitted in partial fulfillment of the requirements for the degree Master of Musical Arts in Composition.

August 1970
Copy 1

COLOURED
Canticle of the Island
The Awakening
Ragnarök
Elegy--Epilogue

Instrumentation

3 Flutes (doubling 3 Piccolos)
3 Clarinets in Eb
3 Oboes (3rd doubling English Horn)
2 Bassoons (2nd doubling Contrabassoon)

Harp
Piano (will need 2 soft timpani mallets)
Soprano (3rd movement only)

Perussion

Antique Cymbals
High Cymbal (ff)
2 Maracas
Medium Tam-Tam
Small Tam-Tam (ff)
and tub of water

Tom Toms (ff, ff)
Timbales (ff, ff)
Medium Tam-Tam
Congas (ff)
Long Drums (ff, ff)
Marimba (ff)

If = hard, ff = medium, ff = soft mallets
according to instrument

Performers Placement

Perc 5
Pho
Cel
Hrp
Perc 6

Perc 3
Vib 2
Cb
Hrp
Perc 5

Bsn
Vla
Vc
Cl
Bar
Canticle of the Island
The Awakening
Ragnarök
Elegy-Epilogue

Instrumentation

Piccolos) 4 Trumpets in B♭
4 Horns in F
g English
3 Trombones (3rd Bass Trombone)
9 Tubing Contra-
1 Tuba

Piano (will need 2 soft timpani mallets)
Soprano (3rd movement only)

Percussion
2 Que Cymbals
Vibraphone (ff, ff) 4 Glockenspiel 7 Bass Drum
Medium Tam Tam 3 Medium Tam Tam
Congas (ff) Log Drums (ff, ff) Temple Blocks (ff) 2 Timpani
Medium Cymbal (ff) Harimba (ff)
Tub of water (ff, ff) Marimba (ff)

ff = hard, ff = medium, ff = soft mallets according to instrument

Celeste

Performer Placement

Perc 5
Pno
Cel
Hrp
Perc 6

Large Tam Tam
Chimes
Glass Chimes
Performers Placement

All performers begin at the places shown on the diagram. Movements to the positions numbered 1 to 9 are indicated in the score. Flutes should memorize the music at positions 1 and 2. Trombones should have stands only at 3, 2, and 4. Trumpet 1 and 2 should have stands at positions 5 and 6. Trumpet 2 at 5 and 7, trumpet 3 at 5 and 8, and trumpet 4 at 5 and 9. All brass mutes should be straight unless otherwise specified.
Poor Copy!
Hall-stopped 4/4

PP Hall-stopped 4/4

pp

Hrp

Touch strings at node for 3rd partial

harmonics

pp

niente

pp

niente

pp

niente

pp

niente

pp

to A C

B Desc

Stz

Stz

Stz

Stz

N. indicates a slow vibrato, varying the pitch 1/2 tone each way
Flute procession:

- Fl. 1 to position 4 stage right, Fl. 2 to position 4 stage left, Fl. 3 remains at position 3
Flute procession (1, 2 only)

12 to position 4, stage left, Fl. 3 remains at position 5.
With a sense of foreboding (\textsuperscript{1-120})

\begin{align*}
\text{Perc 6} & \\
\text{Vln 1} & \\
\text{Vln 2} & \\
\text{Vla.} & \\
\text{Vc.} & \\
\text{Cb.} & \\
\text{Hrp.} & \\
\text{Pno.} & \\
\text{Perc.} & \\
\end{align*}
Poor Copy
*Picc.3 doubles the upper part of Vln.1 beginning in the 8 bar after the percussion 8 bar (sounding 88).
Poor Copy
to Tam-Tam (Water Song)

1
2
3
to Tam-Tam

4
5
to Glass Chimes

6
to Tam-Tam

Poor copy
to Tam-Tam (Water Song)

Teapot to position(6)
with trom 1 and tuba.

fff to Tam-Tam (Water Song)

Teapot 2 to position(7)
with trom 3 and tuba.

Teapot 3 to position(8)
with No. 3 and 4.

Teapot 4 to position(9)
with No. 1 and 3.

15

Begin Circle Music 1

Poor Copy
Poor copy
Elegy-Epilogue

With solemn majesty

Farewell Music (Der Abschied from Mahler's Das Lied von der Erde)
Elegy-Epilogue

Farewell Music (Der Abschied from Mahler's Das Lied von der Erde)
Farewell Music (Der Abschied from Mahler's Das Lied von der Erde)
Farewell Music (Der Abschied from Mahler's Das Lied von der Erde)
Fl
Pno
Perc.
Sop.

On strings
On keys
On strings
On keys
To L. Cym
To L. Cym

Pp
PP
PP
pp

Tammm wawawa-mm oil-e tammm tait-o-mm k-o-a-o-i-mm k-o-

+ over the notes indicates muting; note the strings about 1 inch from the pegs with one hand while playing.
Poor Boys
Deo Gratias
August, 1976