





## REMINDERS

- DO RETURN FILES PROMPTLY TO REGISTRY SERVICES
- DO NOTE B.F. ACTION IN THE COLUMN HEADED "PA OR BF"
- DO INDICATE ON THE FILE JACKET TO WHOM THE FILE IS BEING PASSED
- DO CANCEL B.F.'S ON THE FILE JACKET BUT CONFINE THE NOTATION "CANCEL" TO THE COLUMN HEADED "PA OR BF"
- DO PRESERVE CORRECT DATE ORDER WHEN PLACING PAPERS ON A FILE
- DO USE INK WHEN P.A.'ing OR B.F.'ing FILES
- DO HANDLE FILE WITH CARE
- DO USE BUFF PAPER FOR FILE COPIES
- DO ENSURE THAT ALL FILE COPIES OF MEMORANDA OR LETTERS ARE INITIALED BY THE SIGNER OR STAMPED "ORIGINAL SIGNED BY \_\_\_\_\_"

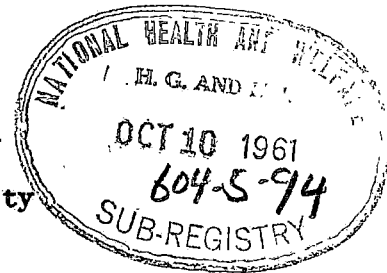
- DON'T RETAIN A FILE LONGER THAN IS ABSOLUTELY NECESSARY
- DON'T HIDE FILES IN YOUR DESK OR IN FILING CABINETS IN YOUR OFFICE WHERE, IN YOUR ABSENCE, THEY MAY BE INACCESSIBLE
- DON'T PLACE CORRESPONDENCE DEALING WITH MORE THAN ONE SUBJECT ON A FILE UNLESS EXTRA COPIES HAVE BEEN MADE FOR RELEVANT FILES
- DON'T LEAVE FILES ON THE FLOOR, WINDOW-SILLS OR WASTE-BASKETS. THIS PRACTICE OFTEN RESULTS IN LOSS OR DAMAGE
- DON'T CHANGE FILE CAPTION OR IN ANY WAY MUTILATE FILE JACKETS
- DON'T OVERLOAD "GENERAL" FILES. IT IS DIFFICULT TO FIND PREVIOUS CORRESPONDENCE ON A GENERAL FILE

A Paper Delivered at the Annual Meeting of the  
Canadian Psychological Association, Saskatoon, Sask.

June 1959

Distortion of Events by Children

Virginia I. Douglas, McGill University



The research which I am going to report this afternoon was done while I was at the University of Michigan and results from a merging of my interests with those of 2 research projects which have been going on there over the past few years.

I had become interested in perception and cognition in children and particularly in the ways in which emotional and motivational factors supposedly produce distortions in the ways in which children think and perceive.

Individuals who observe children repeatedly point to the prevalence of such phenomena as "wishfulfilling fantasies," and "magical thinking," and the theorists have had a virtual field day coining esoteric terms to describe early thought and perception. You are no doubt familiar with many of them. they include such concepts as syncretic imagery (Heinz Werner,) autism (S.Freud and J.Piaget), indissociation (Haget), hallucinatory wish fulfillment (David Rapaport), primary process or the pleasure principle (S.Freud), protot<sup>x</sup>atic and paratoxic distortions (Harry Stack Sullivan), and a concept which I wish to talk about today - the psychoanalytic defense mechanism, denial.

As I reviewed the literature on these and other similar concepts it seemed to me that several of these authors were implicitly or explicitly making some common assumptions about early thought and perception. They seem to assume, first, that after a child has experienced a series of events

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culminating in the satisfaction of a need, he maintains a memory image of those events. Later when the same needs are aroused the memory trace of the stimuli which satisfied those needs is also aroused. I think it is necessary to assume, further, that the child cannot in earliest childhood differentiate between a self-induced memory image (or his own fantasies) and an external perception (or actual external events). <sup>We must</sup> They also assume that self-induced memory images or fantasies are to a certain extent, "tension reducing," and finally, it is generally assumed that the child also has the ability to "shut out" or act as if he were unaware of those external events which conflict with need satisfying fantasies. This latter process is the mechanism referred to by S. Freud as "denial" and by A. Freud as "denial in act or in phantasy."

I had become interested in this mechanism of denial through a series of research studies which were being conducted at the University of Michigan under Daniel Miller. Miller had developed a system for operationally defining the defense mechanisms, and classifying them; and he has been conducting empirical studies based on his classification scheme. Briefly he classifies the various psychoanalytic defense mechanisms on 3 criteria. These include a simplicity-complexity dimension (how complicated are the perceptual and cognitive skills involved in the use of this mechanism?), secondly, a social efficiency dimension (does the use of this defense mechanism facilitate or interfere with social interaction?) and, finally, a degree of distortion dimension (does the use of this mechanism result in gross distortion of events or in only minimal distortions which are so subtle that other people might not even know that the person is

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distorting). In the present research I chose to study two kinds of defensive behaviour, denial and rationalization, because they represent opposite extremes on Miller's 3 criteria.

Let me try to make these ideas more concrete by telling you about the operational definitions for the defense mechanisms which I used in this study. Miller had already demonstrated that measurable defensive reactions could be elicited by the story completion technique. I chose 6 stories all of which followed a similar pattern. Each theme portrays a hero (or in the case of female subjects, a heroine) eagerly looking forward to an important event. In one, for example, the main character has obtained the last available football ticket for the big play off game. In another story the hero has just completed a painting which his teacher tells him is almost certain to win first prize in the art contest that afternoon. Then, quite by accident, another character in the story commits an error which makes it impossible for the hero to reach his goal. In the story about the art contest, for example, the teacher accidentally lays the painting down on some glue. Then, quote, "she starts to pick the picture up off the table. There is a loud rip. The whole centre of the picture is torn in ragged strips. There is just no way it can be repaired, and there is no time to do another one." It is the job of the subject to "finish the story, tell how the hero feels and thinks, what happens, and how it turns out". It is important to note that the subjects were told that the stories described real events which had actually happened. They were also asked in their endings to tell how they thought the story would really end.

The stories were administered individually, the examiner reads the stories to each subject and writes down his response for him.

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I found that it was not too difficult to arrive at objective definitions for the mechanisms in which I was interested. (Inter judge agreement on the codes lay between 84 and 92%.) Denial was coded whenever a child gave an ending which was either incompatible with the unpleasant facts presented in the story or which added facts of a highly unlikely nature. In the story about the art contest, for example, one subject gave an ending in which he stated that the hero fixed the painting, put it in the contest and won first prize. Another ending coded as denial was one in which the subject said that the art contest was postponed until the following week and so the hero had time to do another painting. A child who rationalizes on the other hand might say that Don didn't really mind not winning the contest too much because winning a prize isn't really so important. Many responses coded as rationalization were of the type commonly known as "sweet lemons" or "sour grapes." *ret. qual. J. Coleport*

Now, as I said earlier, denial and rationalization represent opposite extremes on Miller's 3 criteria. Denial, according to Miller, relies on simple skills, involves gross distortions and interferes seriously with social relationships. Rationalization is at the opposite extreme of these 3 dimensions -- that is, it cannot appear until the child has learned complex reasoning skills and the distortions involved are subtle -- so subtle that they do not seriously impede communication with others -- as a matter of fact, according to Miller and several other writers the distortions involved in rationalization frequently facilitate social relationships.

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Now if you will look at the data sheets which I have handed out I will review for you the predictions that we made and the findings we obtained. The first table, Table 1, is a description of the two samples included in the study. As you will notice, the larger sample (consisting of 116 children) is a somewhat select group -- the children were students in the University of Michigan elementary and high schools. A large proportion of these were sons and daughters of college professors and other professionals. The average I.Q. of this group, as you might expect, is in the superior range. Because this sample could not be considered representative of the general population I attempted to obtain a second group of subjects which would contain a larger proportion of children from working class families. I was able to obtain a further sample (consisting of 62 children) from 3 elementary schools in Grand Rapids, an industrial city in Michigan. Because my study was part of a larger project, however, I was limited in this sample to subjects in only one grade -- grade 5. You will note that the Ann Arbor sample includes children in grades 3 to 10.

Now the results. Table 2 contains the findings on the relationship between school grade (a crude measure of age) and the use of the defense mechanism of denial. You will remember that Miller classifies denial as a "simple" defense, not requiring much learning. This evaluation of denial is in line with the psychoanalytic and psychological literature in which denial is frequently termed an "immature" or "primitive" defense. It is said to be common in young children, but if an adult resorts to frequent use of denial he is said to have "regressed." I simply tested



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this assumption, therefore, by hypothesizing that the use of denial would decrease with increasing age. Table 2 shows the mean number of denials over the 6 stories for each of the school grades studied. You will note that denial does tend to decrease with increasing age. The one exception here is in Grade 5 which seems to be behaving more like the younger age groups. This particular class is out of line throughout much of the data. We noted when we ran the study that there were several obviously disturbed children in that classroom and our impressions were later confirmed by the school psychologist. It is possible that this is the explanation for the deviation of this group. If you will look at the Grand Rapids grade 5 mean you will notice that it fits into the trend obtained in Ann Arbor. It would seem, therefore, that the second sample of children (the Grand Rapids sample) is probably using this defense to about the same extent as is the Ann Arbor group. The correlation between school grade and number of denials is  $-.45$  which is significant at well beyond the  $.005$  level.

Now, in Table 3, the relation between school grade and rationalization is reported. Since this is considered a more "complex and mature defense" it was predicted that it would increase with increasing grade. The results are in the predicted direction, with the grade 5 class in Ann Arbor again out of line and again giving results similar to those of the younger classes. Again, also, the Grand Rapids grade 5 data fit into the trends established in the Ann Arbor sample. The correlation here is  $.46$ , significant at well beyond the  $.005$  level.

Now, in Table 4, I have reported results on a kind of story response which I have not yet discussed. I have called these responses realistic



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problem solving. If one reads the literature on denial one finds that various explanations are advanced to explain why the child ceases to use this defense as he matures. Anna Freud and others suggest, for example, that as the youngster learns to tolerate frustration he has less need to resort to denial. Similarly, as he develops the capacity to solve problems (for example, to find substitute gratifications when his needs are frustrated) he will be less likely to distort painful situations. I looked, therefore, for story endings in which the subject simply stated that difficult as it was, the hero would just have to accept the unpleasant situation. I looked for endings too, in which the hero of the story found a substitute gratification for the lost event or managed by realistic means to get around the obstacles to the goal. Endings of this type were coded realistic problem solving and it was predicted that they would increase with age and that they would be negatively correlated with denial. The results in Table 4 show the obtained trends. The correlation between grade and realistic problem solving was .31 (significant beyond the .005 level) and the correlation between realistic problem solving and denial was -.30 (also significant at beyond the .005 level).

Now Table 5 contains the findings on the relationship between defensive and non defensive (that is, realistic problem solving) endings and intelligence. I reasoned that, if rationalization and realistic problem solving, unlike denial, require the maturation of reasoning skills and complex learning processes, then the child of high intelligence should learn earlier to relinquish denial in favor of rationalization and realistic

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problem solving. (I should mention here that since age difference in the use of the defenses had already been found I controlled for age in running these correlations.) You will see that no significant relation was found for denial and rationalization in the Ann Arbor sample, that the relation between denial and intelligence in the Grand Rapids group is significant at only the 10% level, and that the other 3 correlations are significant at the .01 level. I have a hunch to explain the lack of significant correlation in the Ann Arbor sample. It seems to me that the intellectual level of this group (the median I.Q. is 125) may be so high that intelligence is no longer a factor in the learning of defensive behaviour.

The final relation studied involves the correlation between popularity rating and defensive and nondefensive behaviour. According to Miller denial interferes with smooth social interaction because the distortions involved are so extreme that the individual does not share common experiences with others -- to put it another way, he does not "see things" or interpret events in the same way as others do. Again, Miller's classification of this defense is in agreement with the psychoanalytic literature. According to Freud, if an individual uses denial to an extreme degree he "looses contact with his environment" and is then considered to be psychotic.) It might be expected to follow, therefore, that the child who uses denial to an extreme degree will have relatively unsuccessful social relationships with his peers. Rationalization and realistic problem solving on the other hand, should be positively related to popularity. A popularity rating scale was used to obtain a measure of the child's social status.

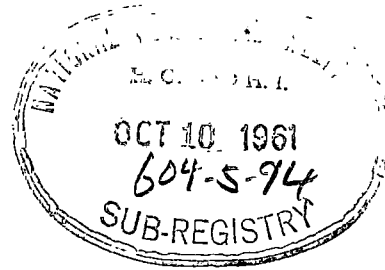
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You will notice in Table 7 that both partialled and unpartialled correlations between popularity rating and defense are reported. It had been previously found that popularity was significantly related to intellectual level; as I have just shown, defense and intellectual level are also significantly correlated. Correlations between defense and popularity were, therefore, run with the effect of intelligence partialled out. Generally speaking the hypothesized relationships were found with one notable exception. There was no relation between the use of denial and popularity rating within the Grand Rapids sample.

We are not at all sure about the reasons for this. We do have questionnaire data from lower and middle class mothers which strongly suggests that the use of denial, day dreaming, etc., is much more unacceptable (or is frowned upon more) in the middle class than in the working class. It is possible, therefore, that there are stronger taboos against denial among the middle class children in the Ann Arbor sample. Incidentally, it also appears (from the age breakdown in Table 8) that the use of denial does not create any particular social difficulty in the younger age groups (where as you will remember it is more frequently found). It is apparently only as the child matures that his age mates begin to react negatively to his use of this mechanism.

In summary then, this study suggests that ~~it is possible~~ it is possible to operationally define the defense mechanism concept of psychoanalytic theory and to subject some of the more common assumptions made by psychoanalysts about at least two of the defense mechanisms to empirical study. Some degree of support was found for commonly held beliefs regarding the so called "level of maturity and complexity" and "degree of adaptiveness" of two of the defense mechanisms.

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DISTORTION OF EVENTS BY CHILDREN

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TABLE 1

COMPOSITION OF THE TWO SAMPLES OF SUBJECTS

	Sample I (N = 116)	Sample II (N = 62)
City	Ann Arbor	Grand Rapids
Schools	Elementary and High Schools administered by University of Michigan	Three public schools
Age	Approximately 8 to 16	approximately 10 to 11
Grades	3, 4, 5, 6, 9, and 10	5
Median I.Q.	125 (superior)	100 (average)
Social Class	Upper middle (mainly professionals, college professors,) except grades 9 & 10 which contains a few children of semiprofes- sional, skilled and unskilled workers.	Mixed (15% professionals, over 30% unskilled workers)



TABLE 2

MEAN NUMBER DENIALS PER CHILD AT EACH GRADE LEVEL

	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 9	Gr. 10
Ann Arbor:						
Mean No. Denials	2.7	2.1	2.4	1.3	.70	.53
Size of Sample	18	16	18	18	27	19
Grand Rapids:						
Mean No. Denials			1.7			
Size of Sample			62			

TABLE 3

MEAN NUMBER RATIONALIZATIONS PER CHILD AT EACH GRADE LEVEL

	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 9	Gr. 10
Ana Arbor						
Mean No. Minor Distortions	.67	1.0	.67	1.3	2.4	2.5
Size of Sample	18	16	18	18	27	19
Grand Rapids						
Mean No. Minor Distortions			1.3			
Size of Sample			62			

TABLE 4

MEAN NUMBER REALISTIC PROBLEM SOLVING ENDINGS PER

CHILD AT EACH GRADE LEVEL

	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 9	Gr. 10
<b>Ann Arbor</b>						
Mean No. Realistic Problem Solving	1.16	1.44	.89	2.22	2.55	2.63
Size of Sample	18	16	18	18	27	19
<b>Grand Rapids</b>						
Mean No. Realistic Problem Solving			1.98			
Size of Sample			62			

TABLE 5

CORRELATIONS<sup>a</sup> BETWEEN PREFERRED DEFENSIVE AND  
NON-DEFENSIVE REACTIONS AND INTELLIGENCE

	Denial	Rationalization	Realistic Problem Solving
Ann Arbor (N = 116)			
Correlation with I.Q.	-.05	.09	.23
Level of Significance	n.s.	n.s.	<.01
Grand Rapids (N = 62)			
Correlation with I.Q.	-.19	.30	.32
Level of Significance	<.10	<.01	<.01

<sup>a</sup> Correlations reported are Pearson-Product-moment correlations, one-tail test.

TABLE 6

CORRELATIONS<sup>a</sup> BETWEEN PREFERRED DEFENSIVE AND  
NON-DEFENSIVE REACTIONS AND INTELLIGENCE BY AGE LEVELS

	Denial	Rationalization	Realistic Problem Solving
Ann Arbor			
Grades 3 & 4 (N = 34)	.03	-.12	.18
Grades 5 & 6 (N = 36)	-.06	.11	.17
Grades 9 & 10 (N = 46)	-.14	.24	.31
	(predicted negative)	(predicted positive)	(predictive positive)

<sup>a</sup>Correlations are Pearson Product-moment correlations, one-tail test.



TABLE 7

CORRELATIONS<sup>a</sup> BETWEEN PREFERRED DEFENSIVE AND NON-DEFENSIVE REACTIONS  
AND POPULARITY RATING WITH AND WITHOUT THE EFFECT OF  
INTELLIGENCE PARTIALLED OUT

	Denial		Rationalization		Realistic Problem Solving	
Ann Arbor (N = 116)						
Correlation with Popularity	-.27	-.27	.18	.17	.16	.11
Level of Significance	<.005	<.005	<.05	<.05	<.05	n.s.
Grand Rapids (N = 62)						
Correlation with Popularity	-.03	.01	.42	.38	.31	.27
Level of Significance	n.s.	n.s.	<.005	<.005	<.01	<.01

a

Correlations reported are Pearson Product-moment correlations, one-tailed test.

TABLE 8

CORRELATIONS<sup>a</sup> BETWEEN PREFERRED DEFENSIVE AND  
NON-DEFENSIVE REACTIONS AND POPULARITY RATING BY AGE GROUPS

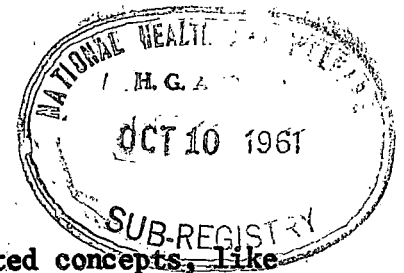
	Denial	Rationalization	Realistic Problem Solving
Ann Arbor			
Grades 3 & 4 (N = 34)	-.03	-.02	.31
Grades 5 & 6 (N = 36)	-.40	.22	-.16
Grades 9 & 10 (N = 46)	-.37	.28	.31

<sup>a</sup>Correlations reported are Pearson Product-moment correlations, one-tailed test.

A paper presented at the Annual Meeting of the Canadian Psychological Association, Kingston, Ontario, June 1960.

### Wishfulfillment and Cognitive Tasks

Virginia I. Douglas, McGill University



The concept of wishfulfillment and various related concepts, like "primary process", "the pleasure principle", "autism", and "denial in phantasy" - have received considerable attention from psychoanalysts and from other personality theorists. Until recently, however, the concept has received little notice from the empiricists.

Wishfulfillment refers to a tendency to engage in pleasant phantasies particularly when the individual is confronted with a stressful or unpleasant situations. This often involves an apparent denial or unawareness of painful stimuli. The studies which I am going to report represent attempts to submit two assumptions which are frequently made about wishfulfillment to empirical study. Theorists implicitly or explicitly assume, first, that wishfulfillment is a normal process in small children but that it gradually diminishes in the course of normal development and is superseded by what Freud calls "the reality principle" or thinking which is governed by the real nature of objects and events. The second and related assumption is that when children are emotionally disturbed (some kinds of emotional disturbance) they frequently fail to relinquish this mechanism and thus continue to make excessive use of it beyond the age when it can be considered "normal".

We have been experimenting with three different techniques for obtaining quantifiable and objective measures of wishfulfillment. Last year at this meeting I reported a study in which I used the story completion technique and found developmental differences in the tendency of children to distort painful events in stories. The results of that study appear in Figure No. 1 of the handout.

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This year, Esther Baum, Vivian Freedman, Nora McCardell and I have been experimenting with two other techniques for measuring wishfulfillment which have the advantage of being somewhat more objective and easily scored than the picture completion test. These are a picture-story test and a probability learning task. The Picture story test consists of 20 stories, each of which contains a happy and an unhappy part. In 10 of the stories there is a threat of an unpleasant event but the threat passes and the hero finds himself in a happy situation. In the other 10 stories there is a hope of a pleasant event which does not materialize and the ending is an unhappy one for the hero. Each story is accompanied by two pictures. One represents the happy part of the story; the other the sad part. The child is required to choose the picture that "tells what really happens in the story." Two kinds of errors are possible. If a child chooses the happy picture when the unhappy one is correct his error is called "wishfulfillment". An error involving a choice of the unhappy picture (when the happy one is correct) is labelled "pessimism". Nora McCardell studied the effect of age on the kinds of errors made by children on this task. She had 78 subjects in all and they were drawn in equal numbers from kindergarten, and Grades 1, 3, 5, and 7. Their ages ranged from 5 to 13 years. The groups were matched for sex, I.Q. and socioeconomic background. It was predicted that wishfulfillment errors would decrease as age increased but that there would be no relationship between the number of pessimistic errors and age. McCardell's results appear in Figure No. 2. The decreases in wishfulfillment are significant

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from Kindergarten to Grade 1, from Grade 1 to Grade 3, and from Grade 5 to Grade 7. The only significant drop in pessimism errors is from grade 5 to 7. (It seems likely that we were reaching the ceiling of the test at the <sup>grade</sup> 7 ~~year~~ level.) Figure Number 3 shows the same data expressed in proportions. It is interesting to note that the older children make relatively more pessimistic errors than wishfulfillment errors.

Esther Baum used the same Picture - Story test with matched groups of normal and emotionally disturbed children. (Her emotionally disturbed children were being seen in psychotherapy at the Montreal Children's Hospital). She had 29 subjects. <sup>behaviour problems: enuresis, aggressive outbursts. - (depression)</sup> They were all males and their ages ranged from 7 to 11 years, with a mean age of approximately 9 years. Her results appear in Table 1. As predicted, the normal and disturbed samples do not differ significantly on the number of pessimistic errors. On wishfulfillment however, the mean number of errors is 2.8 for the disturbed group as compared with .8 in the normal group. This difference is significant at the .05 level. The difference between the mean number of pessimistic errors and wishfulfillment errors for the disturbed group also approaches significance (.08 level with a one-tailed test). Again, the same comparison for the normal group is not significant.

Two other studies were done to test the same two assumptions regarding wishfulfillment with a specially constructed probability learning task. Vivian Freedman studied the relationship between age and wishfulfillment and Esther Baum studied differences between the performance of normal and disturbed children on the probability learning task. The test



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consisted of two decks of cards. The experimental deck contained 15 drawings of stick men with sad faces and 5 with happy faces. A control deck was made up of cards marked "X" or "O" in the same proportions (that is 15 X's and 5 O's ). Each subject was administered both the experimental and control deck (the order of presentation of the 2 decks was alternated from child to child). The first trial was a "guessing" trial in which the children were merely asked to guess whether a happy or a sad card (or an X or an O ) would appear next. On the first trial they were not allowed to see which card actually did turn up. On subsequent trials, however, they were shown each card after making their guess and were reinforced verbally by a "right" or "wrong" statement from the examiner. The X - O deck was included to provide a control measure of the performance of children of different ages on a probability learning task involving neutral stimuli. We were interested in the differences between the learning rates of the subjects on the neutral, as compared with the affective task.

On the original "guessing" trial, children in all of the grades tended to predict an approximately equal number of X's and O's on the neutral deck and also an approximately equal number of "happy's and "Sads".

~~(There was a slight tendency for the subjects to predict the happy card, and a slight tendency for the subjects to predict the sad card.)~~

In the experimental deck, therefore, learning involved reducing the happy responses from approximately 10 to 5, the number actually existing in the deck. (Similarly, the number of O responses had to be reduced from 10

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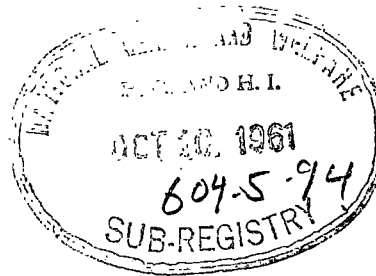
to 5) It was predicted that the tendency toward wishfulfillment would be stronger in the younger children, and that, as a result, they would have more difficulty eliminating the happy than the 0 responses. Discrepancy scores were computed for each child by subtracting the total number of 0 responses (over 11 trials) from the total number of 1 responses. According to the prediction, the size of this discrepancy should decrease as age increases. Figure No. 4 illustrates the relationship between the discrepancy scores thus obtained and school grade. The correlation between school grade and discrepancy score is .29, which is significant at the .01 level. It is interesting to note that the discrepancy for grade 6 is a negative quantity. That is, the older children eliminated the happy responses to a greater extent than they did the 0 responses. This resulted in their expecting fewer of the happy cards than were actually in the deck. It might be interesting to speculate about the tendency. Perhaps children at that age have over-learned not to wishfulfill.

Figure No. 5 illustrates the result obtained by Esther Baum on the same probability learning task with her matched groups of normal and disturbed boys. Once again all of the subjects show a tendency, as the trials progress, to move in the direction of the 15:5 proportions existing in the experimental and control decks. As predicted, however, the disturbed group is much less successful on the learning task involving the happy and sad pictures than they are on the neutral task. The significance of the difference between this pair of distributions was tested with the sign test and is significant at the .001 level.

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Also the distribution of happy responses of the disturbed group is significantly different (at the .001 level) from the distribution of happy responses in the normal group. As expected, the disturbed group is able to match the performance of the normal children on the probability learning task involving the natural X - O stimuli.

Our results tend therefore to support two assumptions concerning wishfulfillment. The first is that wishfulfillment (as operationally defined by our three techniques) decreases with increasing age. The second assumption is that wishfulfillment is more prevalent in disturbed than in normal children. It seems likely as a child matures, our society submits him to learning situations which negatively reinforce his tendency to wishfulfill. In the case of <sup>some</sup> ~~the~~ emotionally disturbed child, <sup>per</sup> however this learning is apparently not successfully acquired.



Wishfulfillment and Cognitive Tasks

V.I. Douglas  
E. Baum  
N. McCordell  
V. Freedman

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FIGURE I  
RELATIONSHIP BETWEEN SCHOOL GRADE AND  
THE USE OF DENIAL AND REALISTIC PROBLEM SOLVING

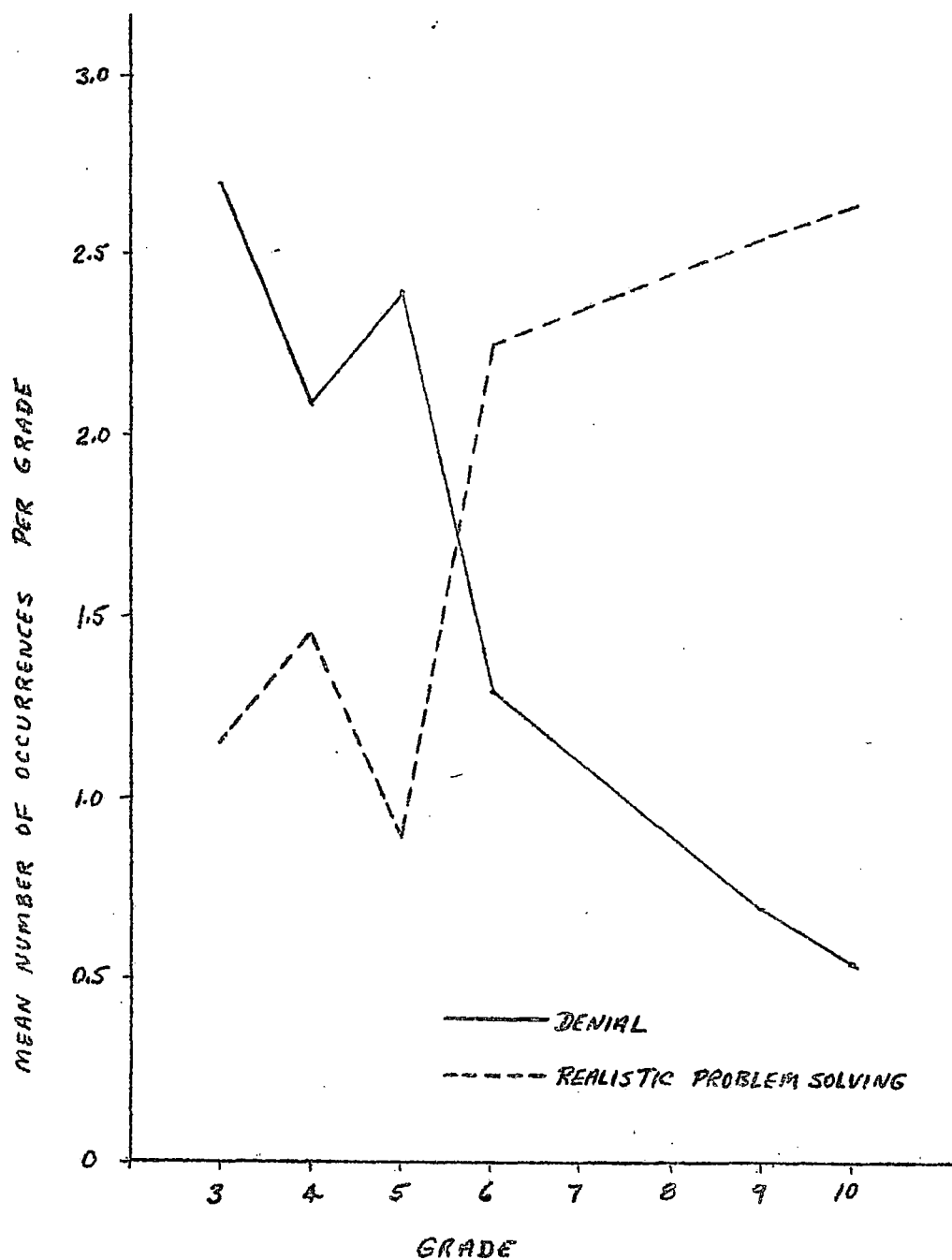




FIGURE II

RELATIONSHIP BETWEEN SCHOOL GRADE AND  
ERRORS IN WISHPFULFILLMENT AND PESSIMISM :  
EXPRESSED AS MEAN NUMBER OF ERRORS

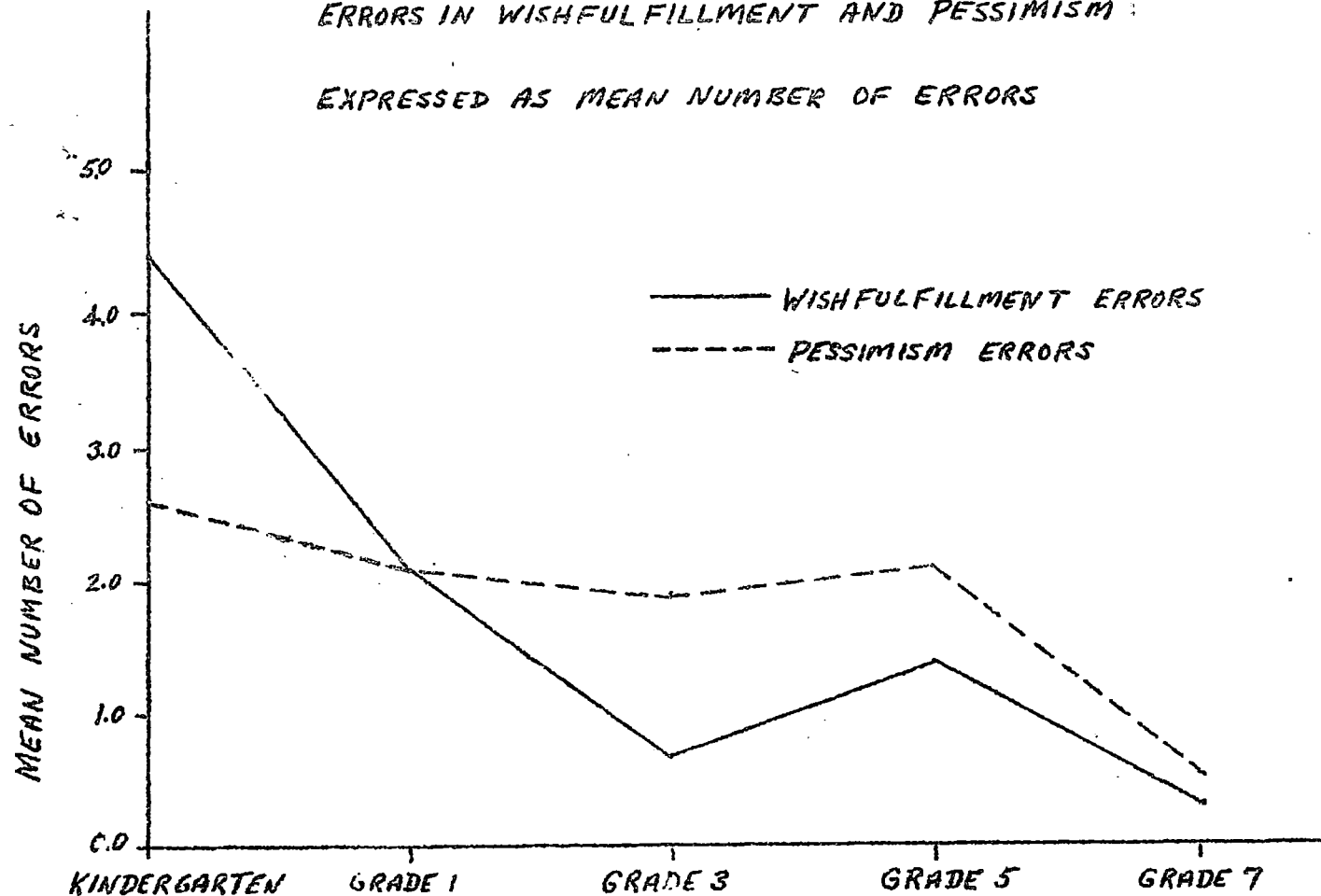


FIGURE III

RELATIONSHIP BETWEEN SCHOOL GRADE AND

ERRORS IN WISHFULFILLMENT AND PESSIMISM :

EXPRESSED AS PROPORTIONS OF TOTAL ERRORS

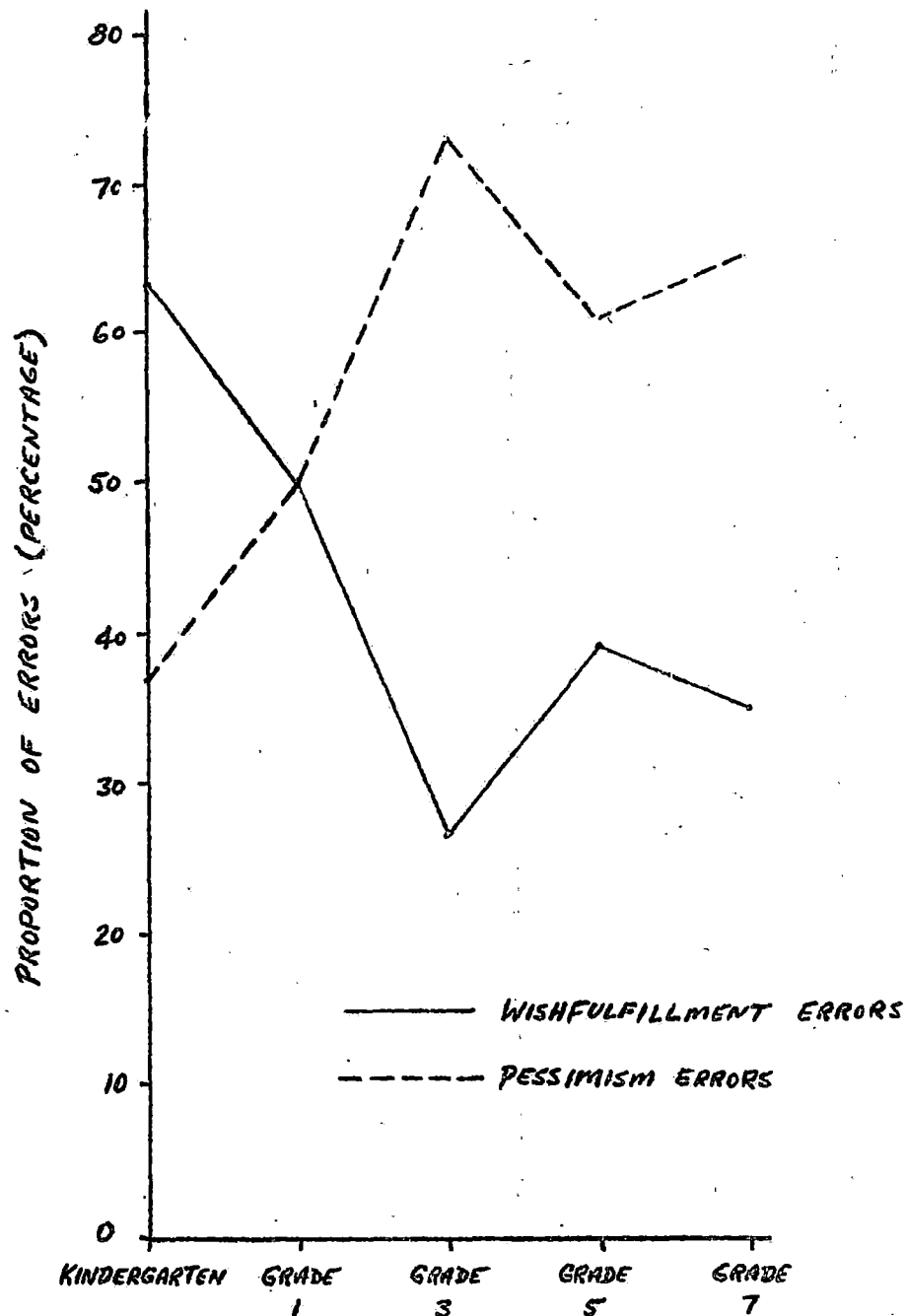


TABLE NO. 1.

Mean Number of Errors Made by Normal and Disturbed  
Boys on Picture - Story Test.

	Normal Boys ( N = 16 )	Disturbed Boys ( N = 13 )
Wishfulfillment Errors	0.8	2.8
Pessimism Errors	1.1	1.2

Note: The number of possible errors is 10.0 for both wish-  
fulfillment and pessimism.

FIGURE IV

RELATIONSHIP BETWEEN SCHOOL GRADE  
AND DISCREPANCY SCORE

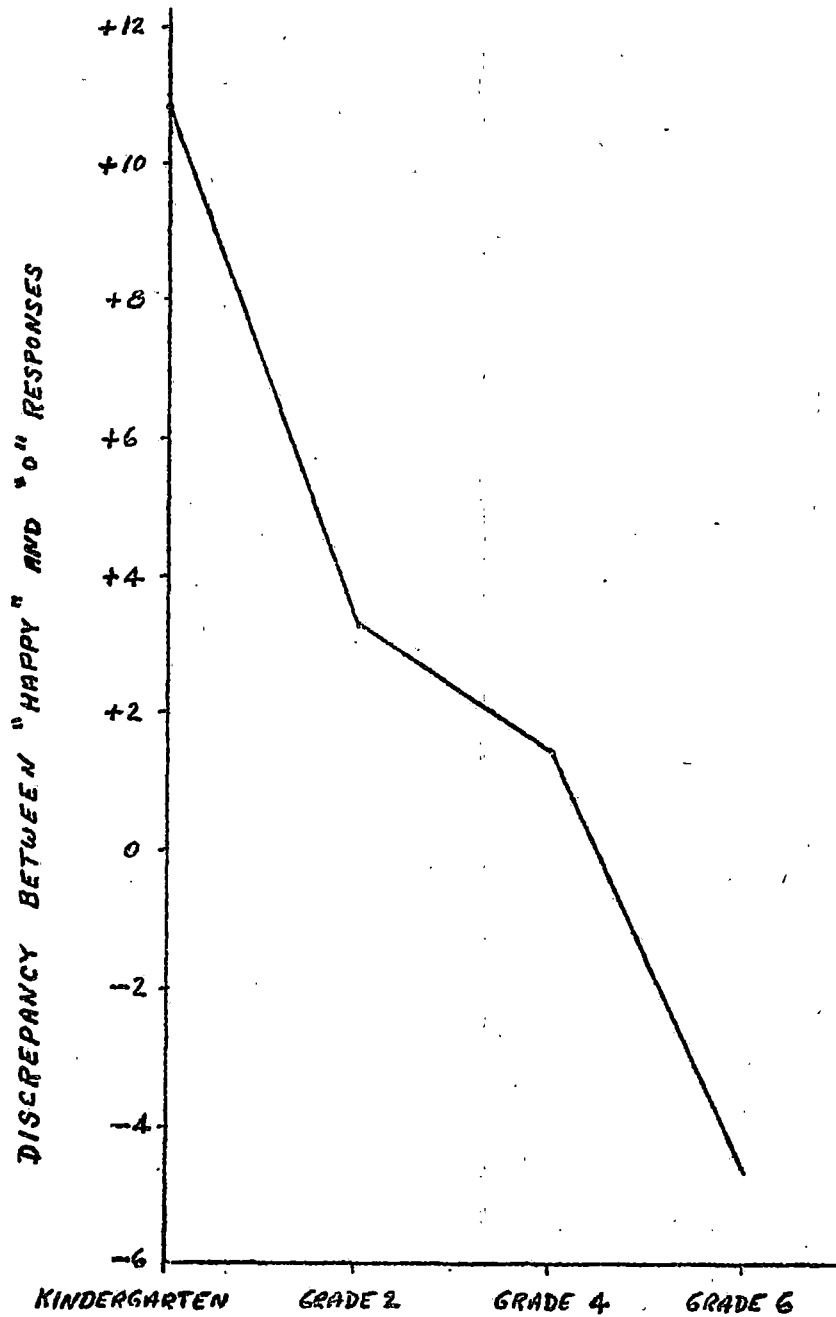
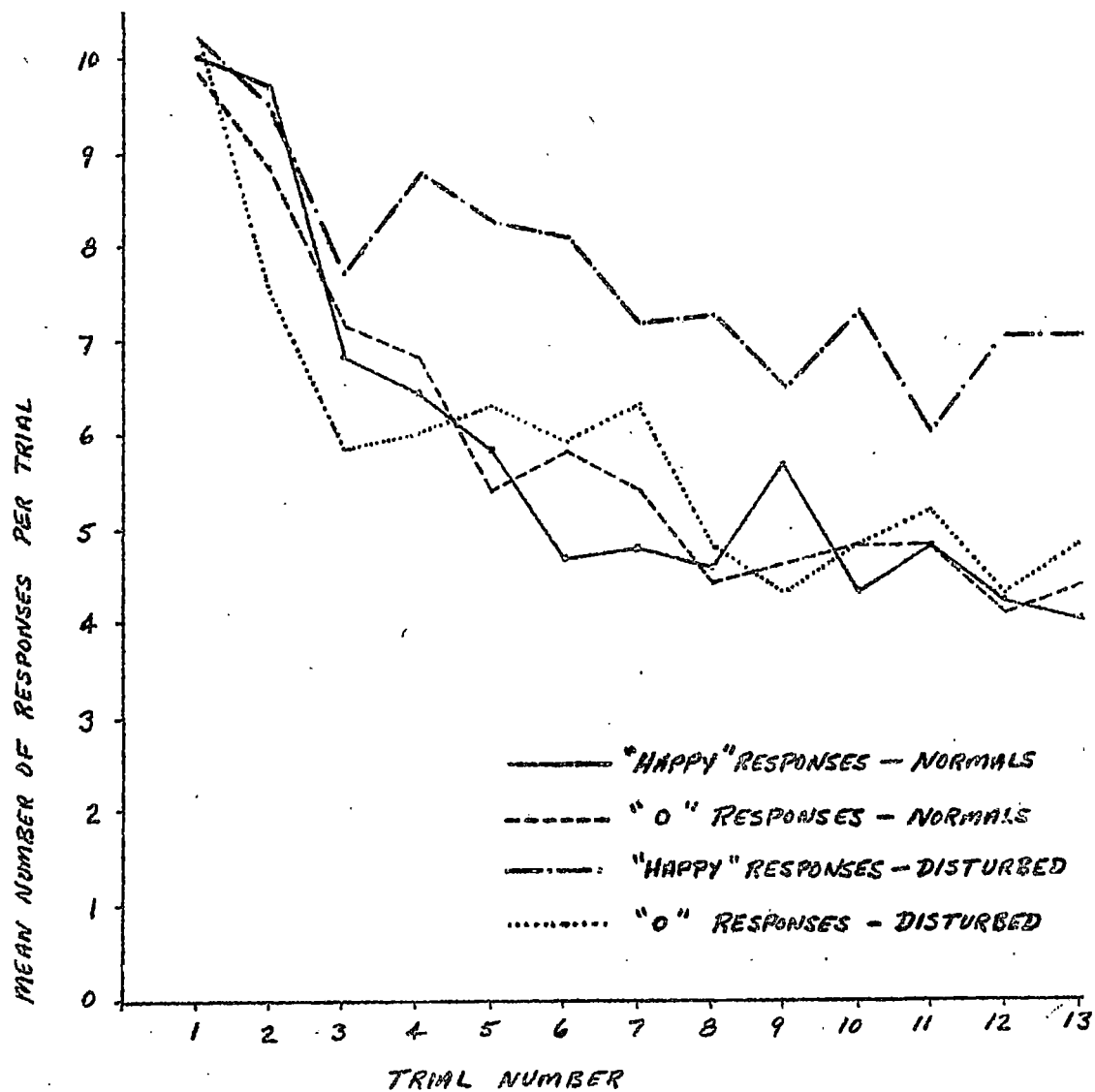
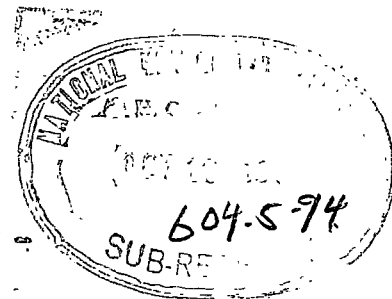


FIGURE V

FREQUENCY OF "HAPPY" AND "O" RESPONSES  
AS A FUNCTION OF TRIAL FOR "NORMAL"  
AND "DISTURBED" SUBJECTS





# Wishfulfillment, Pessimism & Compromise -

## A Developmental Study

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Over the past few years a group of us at McGill have been attempting to study some of the ways in which children cope with situations which have the potential of either fulfilling their wishes or of subjecting them to serious frustration and disappointment. Our original inquiries were guided by the general notion that small children probably have a tendency to engage in wishfulfilling phantasies and to deny painful facts. This assumption is present in many existing theories. Freud, for example, speaks of the primary process. Lewin's theory contains the "Irreality Dimension" concept. The term autism has been used by such theorists as Freud, Piaget, Bleuler and Gardner Murphy. There are, of course, many others, including some of our more modern concepts like selective perception, perceptual distortion, and perceptual defence.

A related notion, that of egocentricity, which involves a concern with one's own desires with an accompanying neglect of others and of reality factors which might conflict with one's wishes is also prevalent in many current theories, most notably, perhaps, in the work of Piaget.

We were interested in studying these phenomena of wishfulfillment, denial and egocentricity. We were also aware at the time we began our studies that, as our work progressed, we would probably have to take into account another process - one which seems, at least superficially, to be

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just the opposite of the wishfulfilling mechanism. This is a process which we have tentatively labelled pessimism. Pessimism like denial frequently represents a distortion of facts. In the case of pessimism, however, the child distorts in the direction of his fears or takes a set of expecting disappointment and frustration. Most of us are aware of the existence of this phenomenon both in small children and in adults under stress. Small children, for example, express all kinds of irrational fears, sometimes in waking phantasies and sometimes in nightmares, and night errors. Frequently, too, when individuals are placed in a situation where their needs may be frustrated they act as if they expect the very worst to happen and become very much overwhelmed by the anticipation of this potential disappointment.

In contrast to the mechanism of wishfulfillment this process which we have called pessimism, has been relatively neglected by theorists. Our general research design has involved developing a series of tests specifically constructed to obtain objective measures of these processes. The tests were then administered to groups of children of different ages and to normal and emotionally disturbed children.

We started out with two general hypotheses regarding wishfulfillment and denial. They follow rather directly from the existing theories. The first is a developmental hypothesis. We predicted that wishfulfillment and denial (as measured by our tests) would be prevalent in small children but would decrease with increasing age. The second hypothesis concerned with the role of denial and wishfulfillment in psychopathology. Our expectation was that, beyond a certain age, over-indulgence in these processes would

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occur more frequently in emotionally disturbed children than it would in normals. Our tests were not particularly designed to study egocentricity but it was our expectation that when it occurred it would probably follow the same pattern as wishfulfillment and denial, that is that it would decrease with increasing age; and would be more prevalent in emotionally disturbed than in normal children.

We made no firm hypotheses regarding <sup>the</sup> mechanism of pessimism, hoping that the data would help clarify our understanding of this process.

As you will see, our thinking on pessimism has been shifting as we have developed new procedures for investigating it.

We have developed four different research tools for studying these phenomena. I will not spend much time on the first two because, although they have helped clarify our thinking the results we have obtained with them make it clear that the tests would have to undergo considerable modification before they could yield any final answers to our questions.

Before I begin describing our tests, let me say a few words about the problems that one faces in attempting to invent techniques for studying a phenomenon such as wishfulfillment. You will notice as I discuss the various techniques which we have used, that we have been experimenting with both relatively objective techniques and with projective instruments which are quite subjective in nature. We are, of course, facing the perennial problem involved in dealing with complex phenomena of this kind. As one moves toward objectivity one loses a good deal of the richness and meaning of the data. Wishfulfillment is, of course, an extremely individual



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sort of thing. It is very difficult to "tailor make" phantasies which will have the same valence for each of our subjects - and even if we can, we forego the opportunity of discovering what particular phantasies a particular youngster might have invented. A second difficulty is inherent in the fact that we wished to investigate developmental differences. This means that we should, if possible, use the same test stimuli throughout the age groups studied. How can one be sure, however, that the test stimuli have the same valence or meaning for different age groups? As I describe our various techniques I will tell you how we have tried to solve these difficulties.

The first technique I wish to discuss is a probability learning task.

The probability learning task consists of two decks of cards. The experimental deck contains 15 drawings of stick men with sad faces and 5 with happy faces. A control deck was made up of cards marked "X" or "O" in the same proportions (that is 15 X's and 5 O's). Each subject is administered both the experimental and control deck (the order of presentation of the 2 decks is alternated from subject to subject. The first trial is a "guessing" trial in which the children are merely asked to guess whether a happy or a sad card (or an X or an O) will appear next. On the first trial they are not allowed to see which card actually does turn up. On subsequent trials, however, they are shown each card after making their guess and are reinforced verbally by a "right" or "wrong" statement from the examiner. The X-O deck is included to provide a control measure of the performance of children on a probability

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learning task involving neutral stimuli. We were interested in the differences between the learning rates of the subjects on the neutral as compared with the affective task.

We found that on the original "guessing" trial, most children tend to predict an approximately equal number of X's and O's on the neutral deck and also an approximately equal number of "happy's" and "sads". In the experimental deck, therefore, learning involves reducing the happy responses from approximately 10 to 5, the number actually existing in the deck. (Similarly, the number of O responses has to be reduced from 10 to 5).

Last year Vivian Freedman administered this test to matched groups of children in four different school grades. (Her example consisted of 60 children and they were matched on sex, I.Q., and socioeconomic status). It was predicted that the tendency toward wishfulfillment would be stronger in the younger children, and that, as a result, they would have more difficulty eliminating the happy than the O responses. Discrepancy scores were computed for each child by subtracting the total number of O responses (over 11 trials) from the total number of <sup>pp1</sup> responses. According to the prediction the size of this discrepancy should decrease as age increases. The first slide illustrates the relationship between the discrepancy scores thus obtained and school grade. The correlation between school grade and discrepancy score is .29, which is significant at the .01 level. It is interesting to note that the discrepancy for grade 6 is a negative quantity.

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That is, the older children eliminated the happy responses to a greater extent than they did the 0 responses. This resulted in their expecting fewer of the happy cards than were actually in the deck. This finding interested us and we began to speculate about the possible reason for it. We wondered if it was possible that, as children mature and learn to relinquish wishfulfillment, they might go through a stage when they overlearn not to wishfulfill. If this were so they might tend for a while toward a kind of negative expectancy.

Esther Baum used the same probability learning task with a matched group of normal and disturbed boys. (At this point we have made almost no attempt to separate out different kinds of emotional disturbance. To meet our criterion of emotional disturbance a subject had only to be a patient in psychotherapy.) All subjects were of at least normal intelligence and had no sign of organic damage. Slide 2 illustrates the results obtained by Baum last year. Once again all of the subjects show a tendency, as the trials progress, to move in the direction of the 15:5 proportions existing in the experimental and control decks. As predicted however, the disturbed group is much less successful on the learning task involving the happy and sad pictures than they are on the neutral task. The significance of the difference between this pair of distributions was tested with the sign test and is significant at the .001 level) from the distribution of happy responses in the normal group. As expected, the disturbed group is able to match the performance of the normal children on the probability learning task involving the neutral X - 0 stimuli.

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This year Nora McCardell attempted to replicate these 2 studies. She divided her subjects into 4 groups -- a "young normal", a "young disturbed", an "older normal", and an "older disturbed" group. (The age range covered and the definition of normal and disturbed were approximately the same as in the previous studies.) Her results tend to corroborate the findings of the previous studies. There was a significant relationship between age and performance on the probability learning task. Findings on the normal-disturbed dimension did not reach significance but were in the expected direction. It would seem, therefore, that older children and well adjusted children surpass younger and emotionally disturbed children on a learning task which involves reducing one's expectancy of pleasurable stimuli. It must be noted, however, that we could be dealing simply with differences on an affective as opposed to a neutral task. Before we could make a definitive statement on this question it would be necessary to carry on further work with various combinations of neutral and positive and negative stimuli.

I will not go into much detail on the second technique, a picture-story test because we have now abandoned it in favour of some of the methods which we developed later. It is perhaps sufficient for our purposes today to say that the test involves stories with happy and sad endings. The subject is required to choose pictures which portray the way in which the story ended. Two kinds of errors are possible. If the child chooses a sad picture when a happy one is correct the error is labelled "wishfulfillment". Conversely the choice of a sad picture when a happy one was correct was scored "pessimism".

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Last year McCardell ran this test with children in five different age groups. This year she attempted to replicate this study. As you can see (Slide 3) more significant age differences were found in the first study than in the replication. However it is interesting to note that in both studies wishfulfillment decreases significantly between kindergarten and grade 3. *and that both the wishfulfillment and pessimism curves cross* That is, in kindergarten wishfulfillment is more prevalent *between Kindergarten and Grade 3* than pessimism, whereas after grade 3 this trend is reversed. Once again, our notion that older children might go through a period of "expecting the worst" occurred to us - but the size of the differences in the second study were not particularly encouraging.

The third technique I wish to discuss is one with which we are currently working. It is a story completion test. It involves 5 stories each of which follows a similar pattern. Each theme portrays a hero (or in the case of female subjects, a heroine) eagerly looking forward to an important event. In one, for example, the main character has obtained the last available football ticket for the big play off game. In another story the hero has just completed a painting which his teacher tells him is almost certain to win first prize in the art contest that afternoon. Then, quite by accident, another character in the story commits an error which makes it impossible for the hero to reach his goal. In the story about the art contest, for example, the teacher accidentally lays the painting down on some glue. Then, quote, "she starts to pick the picture up off the table. There is a loud rip. The whole centre of the picture is torn in ragged strips. There is just no way it can be repaired, and there is no time to do another one." It is the job of the subject to "finish the story, tell how the hero

feels and thinks, what happens, and how it turns out." It is important to note that the subjects were told that the stories described real events which had actually happened. They were also asked in their endings to tell how they thought the story would really end.

The stories were administered individually, the examiner read the stories to each subject and writes down his response for him. We were interested in studying age differences in the ways in which children react to frustrations of this kind. We wished, also, to study differences between the reactions of normal and emotionally disturbed children.

The technique involves requiring each child to give his own free response to the stories. It is then necessary to develop as objective a code as possible in order to categorize the responses. This is a complex task but we have found that it is possible to develop codes which yield high inter-judge agreement. In the first study with this technique we found significant age differences on 3 of our codes. The first kind of response, denial, was coded when the subject gave an ending which was clearly incompatible with the painful facts of the story (that is he acted as if the events which prevented the hero from attaining the goal did not exist). As you will see (Figure ) there is a significant negative relationship (Pearson Product Moment correlation of  $-.45$ , significant beyond the  $.005$  level) between the occurrence of the type of response and age. We have called the second kind of ending rationalization or compromise. In an ending of this type the child accepts the fact that the hero cannot attain the goal but diminishes the disappointment involved by engaging in such techniques as sweet lemons and sour grapes or by portraying the hero as looking forward to achieving the goal

in the future. The third technique, realistic problem solving, involves realistically accepting the painful facts or seeking realistic substitutions. As you can see (in Figure ) the occurrence of these two reactions increases with increasing age. (Significant level of both beyond .005).

Miss Sandra Gallob used the story completion test this year with a sample composed of normal boys and a matched group of emotionally disturbed boys. Her sample consisted of 13 normal and 13 maladjusted boys and their ages were between 9 and 12 years. Gallob found that her subjects were distorting the facts contained in the stories in three major ways. The first was the kind of denial which I described in connection with the developmental study. The other two kinds of endings involve distortions or additions to the facts of the stories, which are of a very extreme nature. She has labelled these "egocentric wishfulfillment" and "extreme pessimism". In egocentric wishfulfillment the child added events to the story which were most blatantly wishfulfilling. This often involved grandiose fantasies in which all of the child's wishes were satisfied or endings in which other characters in the story "bent over backwards" trying to make amends for the frustration the child had suffered. One subject gave an ending, for example, in which the mother felt so sorry for the hero that she "baked him a big apple pie and bought him a banana split". In another story a City Bus made a special trip all the way back from the lake to pick up the disappointed hero, and in another, the hero not only gets to the lake but saves another child's life shortly after his arrival. The "extremely pessimistic" responses are just as imaginative - although toward quite a different end. In endings of this type the child adds painful facts to his story which go far beyond the ones presented in the original theme. In one story in the test battery the hero is prevented from seeing a movie because of a forgotten

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dental appointment. One subject gave an ending in which the hero had 5 teeth pulled, had to have his teeth frozen and drilled and the nerve cut - so that "the hero could not eat candy and was sad". In another sad ending the hero gets left behind at a picnic, becomes lost and the police find him wandering in the woods.

Galloob had predicted that endings coded as denial, egocentric wishfulfillment and extreme pessimism would be more frequent in the emotionally disturbed children in her sample. She did not find significant differences in the case of denial but her predictions were supported on the other two codes. (We looked at the scores of each of the emotionally disturbed children to see whether individual children tended to favour either egocentric wishfulfillment or extreme pessimism. The data suggest, however, that these two apparently opposite processes frequently occur in the same child).

The fourth (and final) technique which we have developed is a multiple choice story completion test. The stories are somewhat similar to the ones used in the story completion test just described. In each story the hero is eagerly looking forward to some emotionally arousing event. However the story is terminated in the middle and the child is asked to choose one of three possible endings which the examiner reads to him. Of the three endings one is very happy (or wishfulfilling), another is very sad (or pessimistic) and the third represents a kind of compromise between the child's wishes and the demands of reality. One story, for example, is about a boy whose kite falls on the road in front of a speeding car.



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In the happy ending the kite is blown to safety by a gust of wind. In the unhappy one the car runs over the kite and "It is easy to see that it would never fly again". The compromise ending states that the car hits the kite - but the hero sees that it can be mended - "It will fly again, not as well, nor as high, but at least he still has a kite". An attempt was made to match the three kinds of endings in length and difficulty of vocabulary. Coleman studied age differences on this test. His sample consisted of 60 normal males representing eight different age groups from nursery school to grade 6. His results appear in Figure . (The study has since been replicated with a group of 90 males and females in grades 4 to 6. The age trends found by Coleman occurred in both the male and female subjects.)

Pearson product moment correlations were computed between school grade and each of the three kinds of ending. The obtained correlations were significant at the .01 level for the happy and the compromise endings. In the case of the sad endings the correlation was not significant (A T-test however, revealed that when the number of sad endings for the nursery school and Kindergarten groups was compared with the mean number for the 3 older grades, the difference was significant at the .02 level.) *pessimism was greater in the younger groups*

These findings were in general agreement with our previous results. on wishfulfillment and compromise. The trends obtained on pessimism do not agree, however, with the notion that as children relinquish wishfulfillment they go through a period in which they expect sad and disappointing things to happen. Instead, it would seem that both wishfulfillment and pessimism are more prevalent in young children than in older ones. (Our inclusion of a

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choice of a compromise ending in our design has, of course, complicated the picture.)

We are currently experimenting with the multiple choice story completion test with samples of emotionally disturbed children. Our N is very small but the results so far are quite encouraging. Our prediction was that emotionally disturbed children would, like the younger normals, tend to choose either the very happy or the very sad endings (rather than the compromise ones). So far the results on the few disturbed children that we have run strongly support this hypothesis. When the test was administered in 3 classrooms the disturbed children (as selected by the teacher) tended to be at the extreme of the distribution of their class on either the very sad or the very happy endings. We have also run it on 7 children currently receiving psychotherapy. This group clearly stands out as being quite different from the normal control. Four out of the seven, for example, gave four or more sad endings. Whereas in Coleman's normative data covering the same age range, only 2 children out of 60 gave as many as 4 sad endings.

In summary then, it appears that our expectations with regard to wishfulfillment, denial and compromise have been fairly well substantiated. I think that the decline in wishfulfillment and the increase in compromise with age can probably be explained in terms of a gradually increasing tolerance for frustration combined with the learning experience a child undergoes in our culture and the maturation of perceptual and cognitive ~~abilities~~ abilities.

I find the results on pessimism, however, much more difficult to understand. Some of the apparent inconsistencies in our data can probably be cleared up through better designed studies. I find it intriguing, however,

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to think about how this tendency toward pessimism might be learned and reinforced. But perhaps we can speculate about this during the discussion.

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