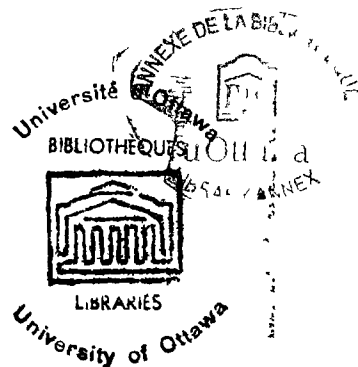


H-T-P DRAWINGS, THEIR MEANING
AND THE LEVELS HYPOTHESIS

By Paul C. Zutterman

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CURRICULUM STUDIORUM

Paul C. Zutterman was born June 25, 1933, in Wevelgem, Belgium. He received his Bachelor of Arts (Philosophy) from Scheut in Brussels, Belgium, in 1955. He was ordained a priest in the Missionary Congregation of the Immaculate Heart of Mary in Brussels, in 1958. He received his first Licentiate in Psychology from the Catholic University of Louvain, Belgium, in 1962.

TABLE OF CONTENTS

Chapter	page
INTRODUCTION.	vii
I.- REVIEW OF THE LITERATURE.	1
1. Buck and Hammer's Assumptions	1
2. The Person Dynamics	5
3. The Tree Dynamics	17
4. The House Dynamics	22
5. Experimental Research Evidence	24
6. Summary and Conclusions	27
II.- LEVELS OF CONSCIOUSNESS AND MEANING OF H-T-P	
DRAWINGS.	29
1. The Levels Hypothesis	29
2. Hammer's Application of Levels Hypothesis to H-T-P	32
3. Adorno's Levels Hypothesis Applied to H-T-P	35
4. House-Person-Tree Sequence and the Self	50
5. Summary and Hypotheses	60
III.- EXPERIMENTAL DESIGN	64
1. The Sample	64
2. Judges	70
3. The Semantic Differential	87
4. Experimental Procedure	98
5. Analysis of Data	101
IV.- PRESENTATION OF RESULTS	106
1. Reliability of Subjects' Ratings	106
2. Reliability of Judges' Ratings	107
3. Means of Distances and Wilcoxon z Scores	114
V.- DISCUSSION OF RESULTS	124
1. Actual Self Ratings	124
2. Ideal Self Ratings	137
3. Evaluation of Results	140
SUMMARY AND CONCLUSIONS	149
BIBLIOGRAPHY.	157
 Appendix	
1. SEMANTIC DIFFERENTIAL - SCALES PER FACTOR	161
2. SAMPLE OF SEMANTIC DIFFERENTIAL RATING SCALES	162
3. <u>ABSTRACT OF H-T-P Drawings, Their Meaning and the Levels Hypothesis</u>	163

LIST OF TABLES

Table	page
I.- Significance of Difference Between Mean Scores of the Ottawa University Group (N=59) and the St. Patrick's College Group (N=33) on Actual Self and Ideal Self.	66
II.- Probability of Obtaining a Deviation Equal to or Greater than Given Deviation from Test to Retest on the Subjects' Ratings (Item Reliability).	108
III.- Probability of Obtaining Given Deviations from Test to Retest on Judge I's Ratings of Subjects' Actual and Ideal Self. (Factor Score Reliability).	110
IV.- Probability of Obtaining Given Deviations from Test to Retest on Judge II's Ratings of Subjects' Actual and Ideal Self. (Factor Score Reliability).	111
V.- Probability of Obtaining Given Deviations from Test to Retest on Judge III's Ratings of Subjects' Actual and Ideal Self. (Factor Score Reliability).	112
VI.- Average Absolute Deviations and Related Probabilities of Occurrence of Factor Scores Based on Judges' Ratings	113
VII.- t-Ratios Associated with the Occurrence of Observed Concordance (w) between the Judges' Rankings of Distance Differences between H-T-P Drawings Rated for Actual and Ideal Self.	115
VIII.- z Values and Level of Significance (p) for Differences between Distances from Each One of the Drawings to the Actual Self and the Ideal Self.	117
IX.- Means of Distances between the Actual Self and Ideal Self and the House, the Tree and the Person, per Judge	118

LIST OF FIGURES

Figure	page
1.- Diagram Showing the Sequence in Semantic Distance of the Distance of the House, Tree, and Person, for each Judge, in Terms of Closeness to the Rated Concepts.	120

INTRODUCTION

Reflection of the self is considered by many as the basic premise of projective drawings. The three wholes of the House-Tree-Person Test, a projective-drawing technique known and from here on referred to as the H-T-P, are said to be regarded as a self-portrait, as well as the drawing of a specific or composite house, tree, or person.

Many studies in projective techniques have been aimed at obtaining insight into this self-projection process. Many writers have speculated about how and the extent to which personality dynamics, needs, conflicts and fantasies of a subject are revealed by his responses to a projective device. As far as the H-T-P is concerned, John N. Buck, its innovator, and Emmanuel F. Hammer have hypothesized that these drawings reflect the self-concept each on a different personality level. They speculate that the extent to which a subject reveals himself in his drawing-response, and the way in which he does it, is largely determined by the degree of defensiveness he experiences toward each of the three wholes. From this premise Hammer has further assumed that therefore the H-T-P drawings can be located along a conscious-unconscious personality dimension. On this dimension the Person drawing should occupy a position in the conscious area, the Tree drawing a position in the unconscious area, and the House drawing should take an in-between position.

That H-T-P drawings may reflect different levels of consciousness of the personality has in part been experimentally verified.¹ On the other hand, the hypothesis concerning the specific position of these drawings on a conscious-unconscious continuum has not been verified. What is more, Hammer's Person-House-Tree sequence does not seem to be logical nor defensible. On the basis of currently accepted personality dynamics, it would appear that the drawings can take different positions. On the basis of research findings, it would appear that no experimental evidence supports the validity of this P-H-T hypothesis. Therefore, there seems to be ample reason for a reconsideration of the personality dynamics involved in self-projection on the H-T-P drawings.

The purpose of this study was to test an alternative approach to personality dynamics concerning the H-T-P. In their approach, Buck and Hammer seem to emphasize primarily the subject's reaction toward the drawing task. The approach proposed in this study focusses primarily on the meaning the H-T-P drawings have for the subject. For Buck and Hammer, the meaning of a drawing appears to determine the content of the projection rather than its level. In this study, the meaning of a particular drawing is conceived of as directly

¹ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-56 p.

linked with a particular level of psychic functioning in the individual. According to this approach, on the conscious-unconscious continuum the drawings are expected to rank in an H-P-T sequence.

The first chapter of this thesis is concerned with a review of the literature. Buck's and Hammer's theoretical assumptions concerning personality dynamics in the individual taking the H-T-P test are presented. These dynamics are then critically evaluated in the light of projective technique dynamics. The issue is then approached from an experimental viewpoint by a presentation of the available research literature.

The second chapter presents the alternative approach to personality dynamics proposed for this study. It deals with Hammer's application of the levels hypothesis to the H-T-P, and with the conception of levels hypothesis as adopted for this study. In the light of this conception the self-concept is then considered. The chapter concludes with the formulation of the work hypotheses.

The third chapter describes the experimental design and procedures which were devised and implemented in order to test the hypotheses of this project. Discussed in the different sections of this chapter are the sample, the judges, the instrument used, the procedure, and the analysis of the data.

The fourth chapter presents the results, and the fifth chapter contains the discussion of these results. This is followed by a summary and conclusions.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter first briefly states the general theoretical assumptions held by Buck and Hammer concerning personality dynamics in the individual taking the H-T-P test. In the following sections these dynamics are discussed, for each drawing in particular, in the light of projective technique dynamics. One section handles the Person dynamics, another the Tree dynamics, and a third the House dynamics. The next part in this chapter presents data of the research literature bearing on Buck's and Hammer's assumptions. The final section summarizes the previous ones and presents the conclusions to be drawn from the various considerations made.

1. Buck and Hammer's Assumptions.

When John Buck, the author of the H-T-P, introduced his test as a projective technique, he wrote the following:

The Tree, [...] its structure and method of presentation are less dictated by conventional stereotype than are the structure and method of presentation of the House and the Person. Further, it is apparently easier for a subject to portray graphically the ravages of environmental pressure upon a Tree than upon a House or a Person without arousing within himself an awareness of such portrayal.¹

¹ John Buck, "The H-T-P Test", in Journal of Clinical Psychology, Vol. 4, No. 2, April 1948, p. 158.

In this quotation, Buck is saying that the material projected onto the Tree is of a different kind than the material projected onto the House or Person. Also that the subject is not as aware of his projecting while drawing a Tree than while drawing a House or a Person. The author thinks that this difference in content of projection and also in awareness of projection is related to the difference in structural elements and method of presentation of the drawings. Hammer illustrates this principle with an example:

A subject may, for instance, more readily and unwittingly portray his feeling of emotional trauma by scarring the drawn Tree's trunk and truncating its branches, than by a parallel mutilation of the drawn Person's face and body and similar distortion of the drawn Person's arms.²

However, it is striking that in this 1948 publication, Buck³ treats of the Tree on one hand and of the House and Person on the other. He does not mention any similar differentiation between the House and the Person. He simply states that: "The Person as a living [...] human being obviously lends itself well to direct self-portraiture"⁴ and that the House is expected to give indications about the drawer's psychosexual adjustment, his contact with reality and his

2 Emmanuel F. Hammer, (Ed.), The Clinical Application of Projective Drawings, Springfield, Ill., Thomas, 1958, p. 172.

3 Buck, Op. Cit.

4 Ibid., p. 155.

accessibility. No further discriminating elaboration or explanation is provided in this early publication.

Buck did consider the three H-T-P drawings as separate units in a writing of three years later. There he said:

The House, [...] seems to arouse a mixture of conscious and unconscious associations concerning home and interpersonal relationships [...]. The Tree, [...] seems to arouse less conscious associations than either of the other wholes [...]. The drawing of the Person appears to arouse more conscious associations than either of the other two wholes.⁵

In this quotation the three wholes are treated separately but from another point of view. The author considers the associations the subject makes while drawing. He does not go into any dynamic explanation of why the different wholes would arouse different degrees of conscious associations.

It was at the H-T-P Workshop, held in Richmond, Virginia, in 1950, that Buck⁶ elaborated on the dynamics underlying his assumptions. The basic dynamic seems to be that the more the subject is aware of 'giving himself away' the more defensive he becomes. According to the author, the subject feels less threatened of revealing himself while drawing a tree, and consequently the Tree becomes the best

⁵ John Buck, "The Quality of the Quantity of the H-T-P", in Journal of Clinical Psychology, Vol. 4, No. 4, October 1951, p. 354-355.

⁶ -----, Administration and Interpretation of the H-T-P Test. Proceedings of the H-T-P Workshop, Los Angeles, Western Psychological Services, 1950, p. 9.

subconscious portrait of the self of the three wholes. The drawing of the Person probably arouses the most conscious associations, and consequently the subject becomes more defensive and thus gives a more conscious picture of his self-concept.

Hammer has followed Buck very closely in his treatment and dynamic interpretation of the H-T-P. Writing about symbolism inherent in the House-Tree-Person triad, Hammer⁷ has said that the deeper and more forbidden, negative feelings can more readily be projected onto the Tree than onto the Person, as there is less fear of revealing oneself and therefore less need for ego-defensive maneuvering. This statement is partly a repetition and partly an elaboration of what Buck said at the H-T-P Workshop.⁸ What Buck called the subconscious portrait of the self was translated by Hammer as: the deeper and more forbidden, negative feelings of the individual. Hammer⁹ has also made more explicit Buck's reasoning concerning the different degrees of conscious associations aroused by the different drawings. He has assumed a continuum, conscious-unconscious, on which the

7 Hammer, Op. Cit., p. 171-173.

8 Buck, Administration and Interpretation of the H-T-P Test, p. 9.

9 Hammer, Op. Cit., p. 630.

House is situated between the Person and the Tree. The House thus represents a level of personality that is more conscious than the Tree but less conscious than the Person. In other words, according to Hammer, on the continuum conscious-unconscious the three H-T-P drawings should rank in the following order: P - H - T.

The question can be asked now whether this P-H-T sequence assumed by Hammer on the basis of Buck's H-T-P dynamics does indeed correspond to presently accepted personality dynamics. A second question is whether Hammer's P-H-T sequence does indeed occur in the results of experimental research in this field. This question is answered in the fifth section of this chapter. The dynamics concerning the Person, the Tree and the House are examined, respectively, in the next three sections.

2. The Person Dynamics.

The reason why the Person should rank first in the conscious-unconscious sequence is according to Buck's dynamic assumptions as follows. The more the subject is aware that he can give himself away in a particular drawing the more defensive he becomes, and he thus gives a more conscious picture of his self-concept. Buck assumes that the subject has this particular keener awareness to a greater extent while drawing a person than when drawing a house or a tree.

Therefore, the subject becomes more defensive when drawing a person, and thus his drawn Person reflects a more conscious self-portrait than either of the two other wholes.

What is questioned is the last part where the author says that a subject gives a more conscious picture of his self-concept when he becomes more defensive. When a subject is asked to draw a Person, or while he is drawing it, he may become aware that he is drawing himself. In more general terms and paraphrasing Buck, the subject may become aware that somehow he is giving himself away. It is quite conceivable that this awareness would put certain subjects on their guard and that they will try and possibly even succeed, to avoid giving certain conscious materials about themselves. In other words, the product, the drawing of the Person these subjects produce, may not be as full with conscious material of their self-concept as Buck may assume it is. One could possibly even go a step further and say that because of this awareness a subject may try so hard to avoid revealing certain conscious things about himself that he reveals more unconscious material of his self. The latter supposition seems to find some experimental support from a study reported by Murstein.¹⁰ He found that T.A.F. cards of high structure are the most significant diagnostically because subjects tend

¹⁰ Bernard I. Murstein, Theory and Research in Projective Techniques Emphasizing the TAT, New York, Wiley, 1963, p. 193.

to avoid their stimulus-pull and, therefore, reveal their drives and attitudes by this avoidance. As related to the use of drawings, Murstein's study would suggest that subjects may reveal deeper material (drives and attitudes) by defending themselves against the stimulus-pull of a highly structured drawing (Person drawing).

This then could mean that the Person does not have to come first in the conscious-unconscious sequence. However, it does not necessarily mean that the Person should come on the second or third place in the sequence either, for it is possible that the Person still reflects more conscious aspects of the self than the House and the Tree in spite of the defensive maneuvering. The point is though that Buck's and Hammer's reasoning about the dynamics involved seems to be debatable or at least not all-convincing for putting the drawn Person first in the sequence on the conscious-unconscious continuum.

There is a second remark to be made about Buck's and Hammer's particular relationship between defensiveness and projection. Where, as stated above, defensiveness against the Person may result in projection on a deeper personality level in one case, in another it may lead to unproductive stereotypy. Murstein writes: "The results [of the experimental literature] are in general negative to the belief that making the central character in the picture more similar to

subject increases projection [...]."¹¹ In another publication he even states that it reduces projection: "[...] it seems clear that similarity between the central character and the subject to the point of idiosyncratic identification promotes ego defensiveness and a reduction of the degree of projection."¹² The first part of the latter quotation seems to agree with Buck's statement that the more the subject is aware that he can give himself away, the more defensive he becomes. It is felt, however, that the second part is not in agreement with Buck's contention that defensiveness in drawing has as result a more conscious picture of the subject's self-concept. Understood in the context of Murstein's writings the second part of his statement means that defensiveness engenders stereotypy because idiosyncracies are being avoided. It is quite possible then for a subject who becomes aware that he may give himself away in his drawing of a Person to convert to stereotypy as a means of escaping this presumably threatening situation. Of course, his conscious feeling of defensiveness at that time will be reflected in his stereotype drawing, and the clinician will be able to recognize that fact. In this sense his drawn Person will

11 Bernard I. Murstein, (Ed.), Handbook of Projective Techniques, New York, Basic Books, 1965, p. 52.

12 -----, Theory and Research in Projective Techniques Emphasizing the IAT, p. 209.

reflect an aspect of his conscious self. But that the subject was defensive at the time of the drawing would probably be the most significant thing the clinician could say about this subject's conscious self-concept. That is most probably not what Buck had in mind when he said that the drawn Person lends itself well to direct self-portraiture.

It is obvious that the above remarks do not invalidate Buck's and Hammer's principle according to which the drawn Tree reveals the deeper layers of personality and according to which the drawn person evokes the strongest defensive reactions. Ada Abraham,¹³ however, feels that this principle has to be applied with the greatest caution. In a publication on Machover's human figure test, she puts it as follows. According to her, it is possible that a change in expression from one drawing to the next is due to a change in the subject's attitude in the course of the administration of the test. She gives the hypothetical example of an inhibited child. By the time the child has come to the third drawing, the Person, it may have shed bit by bit its initial exaggerated control, and, finding the situation now less threatening and less disturbing, it may express itself more freely in the drawing of the Person. That would mean,

¹³ Ada Abraham, Le Dessin d'une Personne. Le Test de Machover, Neuchâtel (Switzerland), Delachaux et Niestlé, 1963, p. 163.

Abraham thinks, that the psychologist would find the deeper personality traits in the drawn Person, and not in the drawn Tree as Buck and Hammer have assumed. In such a case, one might find the Person at the other end of Hammer's continuum.

Abraham's warning goes to show, once again, that, at least on the theoretical level, the proposed sequence P-H-T, does not seem to be as stable a proposition as Buck and Hammer may convey it is. More specifically, it shows that the drawn Person could assume another position in the conscious-unconscious sequence. Abraham's warning, however, draws the attention to the assumed personality dynamics underlying the specific order of presentation of the H-T-P. The order of presentation of the stimuli, House, then Tree, and then Person, always remains the same. Hammer gives the reason:

This specific order provides the most gradual introduction into the drawing task, in that in step-by-step manner, it leads up to the entities that are psychologically more difficult to draw. The subject is gradually led along from the more neutral to the 'closer-to-home' portraits. Thus, the drawing item which arouses the most conscious associations is left to the last.¹⁴

According to this quotation, the purpose of the House, Tree, Person order of presentation is to lead the subject gradually along the continuum from less conscious to most

¹⁴ Hammer, Op. Cit., p. 166.

conscious. According to Buck,¹⁵ however, the Tree arouses less conscious associations, the House arouses a mixture of conscious and unconscious associations, and the Person arouses the most conscious associations. Why then, one could ask, is the order of presentation not: Tree, then House, and then Person? Also, in the above quotation, Hammer calls the House neutral whereas Buck refers to it as a mixture. In chemistry, for instance, a mixture of substances can result in some other neutral substance, but it can hardly happen in psychology. Apart from these inconsistencies, Hammer's statement is not satisfactory on another score: he does not provide a dynamic explanation of why the psychologically most difficult drawing should be left to the last. Buck did give this explanation during the workshop discussions. He said:

You will notice that we reserve the Person, which probably arouses the most conscious associations, until last in each phase. We want the subject to be less able to defend himself by the time he reaches the Person. If he meets the Person first he may be able to suppress certain material and not produce it in his drawing, whereas he will presumably be less able to censor his production, so to speak, if strong emotionally-tinged associations have already been aroused by the drawing of the House and the Tree.¹⁶

The reason then for leaving the Person as the last task is to lessen the subject's defenses. A legitimate procedure. It

¹⁵ Buck, "The Quality of the Quantity of the H-T-P", p. 354-355.

¹⁶ -----, Administration and Interpretation of the H-T-P Test, p. 9.

looks though as if Buck's quotation could be interpreted in this way: because of that particular order of presentation the subject is more able to defend himself at the time of the House and Tree. If this expectation does in fact materialize in the testing situation, the Person may not give a more conscious self-portrait than the House or the Tree. In point of fact, it will be remembered that Buck¹⁷ has stated at the workshop that the Person probably arouses the most conscious associations, and that consequently the subject becomes more defensive and thus gives a more conscious picture of his self-concept. If one accepts the assumed dynamics proposed by Buck and Hammer, it would seem that the specific order of presentation of the H-T-P defeats those dynamics. As a result, the drawn Person would not rank first but last in the conscious-unconscious sequence. This sequence may become: House, Tree, Person.

There appears then to be a conflict between the authors' personality dynamics proposed for the H-T-P drawings and those proposed for the administration of the test. Or is there? The question can be raised if, as Buck¹⁸ said, previous strong emotionally-tinged associations, caused by the House and the Tree, actually do weaken the subject's

17 Ibid.

18 Ibid.

censorship in his production of the Person. Is it not possible that these previously aroused strong emotions may cause the subject to organize his defenses even stronger? Hammer himself seems to accept this possibility. After having administered several projective drawing techniques to a subject, Hammer noticed that the subject's defenses deepened, and he remarked: "By now the patient has submitted himself to projective device after projective device and has begun to come to himself, to muster his defenses."¹⁹ In other words, this patient came to himself--or may one say, realized what was happening?--only after a number of drawing techniques. His immediate reaction was to muster his defenses. Within one projective drawing technique, the H-T-P, is it not conceivable that the emotions aroused by the House and the Tree may make the subject realize that he is giving himself away, and consequently mobilize his defenses in time to meet the last task, the Person? In this way, the drawn Person would yield, according to the authors' proposed dynamics, a more conscious picture of the subject's self than either of the two other drawings, and its first place in Hammer's sequence would be dynamically well accounted for.

A final remark concerning the defensiveness presumably experienced by the subject facing the Person drawing. Buck in his writings may be referring to two different kinds

¹⁹ Hammer, Op. Cit., p. 460.

of defensiveness. In the quotation on page 11 he refers to a defensiveness that comes about because of fear of revealing oneself. It may result in a suppression of certain material. But the author continued to say:

Of course, in drawing his Person, the subject has certain body cues which he can use, but at the same time he will be troubled because it is more difficult to produce an aesthetically pleasing Person than a Tree or a House.²⁰

The fact that it is more difficult to draw an aesthetically pleasing Person than a Tree or a House troubles the subject. It troubles many a subject. Some will say so. Others may convey it, for instance, through hesitancy and frequent erasure. They become defensive because of a frustrating task. In passing it should be noted that it is assumed here that there are subjects who express a considerable amount of difficulty in drawing hands, for instance, and finally put them behind the back of the Person or in his pockets, not because they experience guilt over auto-erotic activities, but simply because it is difficult for them to draw aesthetically pleasing hands. It is an accepted fact though that certain individuals do use this second type of defensiveness to shield the first type. In the case of the second type, however, the subject is not really concerned about revealing himself. His defensiveness will not necessarily result in

²⁰ Buck, Administration and Interpretation of the H-T-P Test, p. 9.

a suppression of certain materials. Also, the fact that the Person is the last in the sequence may not lessen his defensiveness. On the contrary, it may strengthen it because of a felt discrepancy in degree of difficulty between the previous relatively easy drawings and the difficult Person drawing. In short, in a case where the aesthetic problem is more urgent than the fear of projection, Buck's and Hammer's reasoning for putting the Person first on the continuum may not apply.

This possibility of two types of defensiveness puts an extra burden on the shoulders of the diagnostician. However, as far as this discussion is concerned, it puts a heavy doubt on the generality of Buck's statement that the Person evokes the type of defensiveness that directly affects projection. Maybe some types of personality exhibit one particular kind of defense and other types the second kind. An experiment carried out by Getzels²¹ seems to suggest that the projection-defensiveness is used preferably by psychoneurotics. This investigator utilized two forms of a sentence-completion test. One was couched in the first person and one in the third. The subjects were sixty-five veterans, 25 diagnosed

²¹ J.W. Getzels, The Assessment of Personality and Prejudice by the Methods of Paired Direct and Projective Questionnaires, unpublished thesis, Harvard College Library, Cambridge, 1951, quoted by G.W. Allport, "The Trend in Motivational Theory", in American Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 110.

as well adjusted and 40 as psychoneurotic. The results showed to a highly significant degree that the well-adjusted men gave identical responses to the first-person and to the third-person completions. The psychoneurotics, on the other hand, varied their responses to a highly significant degree. When queried directly they gave a conventional response. When queried indirectly the response was more personal. The author's interpretation was that the first-person completion is so direct that in the psychoneurotic it invokes the mask of defense and elicits a merely conventionally correct response. If then one assumes with Hammer²² that the Person is more close-to-home as a self-portrait as far as the subject is concerned, it could be likened to the first-person completion. It would therefore follow that the Person triggers off Buck's first type of defensiveness in the psychoneurotic rather than in the normal.

Up to this point the focus was turned upon the dynamics concerning the drawn Person as assumed by the authors. The main dynamic is presumably defensiveness on the part of the subject faced with the task to draw a person. In the above paragraphs it was suggested that this type of defense may result in less conscious material projected and possibly even in a projection of more unconscious material. The latter

22 Hammer, Op. Cit., p. 630.

seemed to be supported by research reported by Murstein. Murstein also feels that defensiveness may result in a reduction of projection and lead to barren stereotypy. Abraham pointed to the possibility that defensiveness may already have disappeared by the time the subject comes to the last drawing phase. Further, a possibility of conflicting dynamic interpretations within Buck's and Hammer's own systems was discussed. Finally, two types of defensiveness were distinguished, one not subject to the authors' proposed dynamics, the other characteristic of neurotics. These various considerations do not necessarily disprove any of Buck's nor Hammer's propositions. They go to show though that no definite agreement could be reached yet as to where on the conscious-unconscious continuum the H-T-P drawings in general, and the Person drawing in particular, should be located. More research in this area is needed.

The following section will consider Buck's and Hammer's proposed dynamics concerning the drawing of the Tree and this drawing's third position on Hammer's conscious-unconscious dimension.

3. The Tree Dynamics.

The reason why the Tree should rank last in the conscious-unconscious sequence is according to Buck's and Hammer's dynamic assumptions as follows. When drawing a

tree, the subject feels less threatened of revealing himself because its structure and method of presentation make it less 'close-to-home' as a self-portrait than a house or person. Feeling freer, therefore, the subject lets go, so to speak, and as a consequence reveals aspects of his self which he presumably would not have revealed otherwise. This implies that he revealed these particular self-aspects unknowingly.

Allport disagrees sharply with this. He has stated:

Normal subjects [...] tell you by the direct method precisely what they tell you by the projective method. They are all of a piece. You may therefore take their motivational statements at their face value, for even if you probe you will not find anything substantially different.²³

Murray²⁴ disagrees with Allport. Talking about the T.A.T. as projective technique, he says that the merit of this test lies in its capacity to reveal things the subject is not willing to talk about because he is not aware of them.

Murstein²⁵ concedes that the more or less popularly held assumption regarding projective techniques that the

²³ Gordon W. Allport, "The Trend in Motivational Theory", in American Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 110.

²⁴ Henry A. Murray, "Uses of the T.A.T.", in American Journal of Psychiatry, Vol. 107, February 1951, p. 577.

²⁵ Murstein, Handbook of Projective Techniques, p. 56-58.

subject is unaware of what he discloses about himself is contrary to current research findings, logic, or both. And indeed, the evidence seems to favor Allport. The experimental evidence seems to indicate a good deal of awareness on the part of the subject as to what he projects on a projective technique. Scodel and Lipetz,²⁶ and Wirt²⁷ found that neurotics displayed a greater ideational expression of hostile impulses on the T.A.T. and Rorschach than did equally hostile psychotics. Indeed, Rader²⁸ posits that projection is closely related to strength of ego control as well as to general socio-cultural background. Thus, with poor control one may find a positive correlation between content and behavior, while with strong control one may find a negative correlation. Rader's findings seem to support Getzel's²⁹ thinking mentioned in the previous section of this chapter, namely, that the type of defensiveness toward the Person as it is assumed by Buck is characteristic of neurotics, people

26 Alvin Scodel and Milton E. Lipetz, "T.A.T. Hostility and Psychopathology", in Journal of Projective Techniques, Vol. 21, No. 2, June 1957, p. 161-165.

27 Robert D. Wirt, "Ideational Expression of Hostile Impulses", in Journal of Consulting Psychology, Vol. 20, No. 3, June 1956, p. 185-189.

28 Gordon E. Rader, "The Prediction of Overt Aggressive Verbal Behavior from Rorschach Content", in Journal of Projective Techniques, Vol. 21, No. 3, September 1957, p. 303-304.

29 Getzels, Op. Cit.

with poor ego control. These findings, however, suggest also that the subject who lets go completely in the tree drawing task would be suspected of poor ego control.

The relationship of projection to ego control has also been supported by Clark's³⁰ work. He found that male subjects expressed little sexual content on the T.A.T. after seeing nude pictures. The use of alcoholic beverages to loosen ego control resulted in an increase in sexual fantasy to the cards.

Allport's statement that the projective method does not yield anything substantially different than the directive method is not contradicted by research. It looks even that it is substantiated by it, not only insofar as normal subjects are concerned but also for those whose adjustment is considerably less than optimal. Many subjects, especially when recruited from a college population, seem to control quite consciously their behavior on projective techniques. Lazarus³¹ feels that responsible for this are the very ambiguity of these techniques as well as lack of stimulus

30 Russel A. Clark, "The Projective Measurement of Experimentally Induced Levels of Sexual Motivation". in Journal of Experimental Psychology, Vol. 44, No. 6, December 1952, p. 391-399.

31 Richard S. Lazarus, "Ambiguity and Non-Ambiguity in Projective Testing", in Journal of Abnormal and Social Psychology, Vol. 48, No. 3, July 1953, p. 443-445.

structure. He thinks that these two factors alert the subject to the possibility that what he says and does may be held against him.

These research findings call for the following considerations with respect to Buck's and Hammer's dynamic conception of the Tree drawing. Their conception seems acceptable if the authors do not exclude the possibility that the subject may be aware of what he discloses about himself. This, of course, implies that the aspects of self reflected in the Tree drawing do not necessarily have to be unconscious. According to Murstein³² the impetus for the popular belief that the subject is unaware of what he discloses may be traced to Lawrence Frank. However, Frank did not make any statement of the kind. He simply suggested that projective techniques were an excellent medium with which to tap the: "private world of the individual comprising as it does, the feelings, urges, beliefs, attitudes, and desires of which he may be dimly aware and which he is often reluctant to admit even to himself much less to others."³³ It is probably writers like Murray who have stretched Frank's words into the unconscious. Murray actually added to Frank's statement when he said that: "whatever peculiar virtue the TAT may have, if

32 Murstein, Op. Cit., p. 56.

33 Lawrence K. Frank, Projective Methods, Springfield, Ill., Thomas, 1948, p. 66.

any, it will be found to reside [...] in its capacity to reveal things that the patient is unwilling to tell because he is unconscious of them."³⁴ That an individual is reluctant to admit to others things that are difficult to admit even to himself, as Frank says, is quite understandable. One wonders though how an individual can be called, as Murray does, unwilling to reveal things when he actually does not know about them.

In short, a dynamic that does not exclude subject's partial control over projection, and that recognizes deep material not necessarily to be unconscious, is acceptable. Moreover, it justifies the position of the Tree in Hammer's sequence, namely, the third position, the one farthest away from complete consciousness.

The next section investigates what explanation, in terms of personality dynamics, Buck and Hammer offer concerning the House's middle position on the conscious-unconscious dimension.

4. The House Dynamics.

The striking thing is that neither Buck nor Hammer present anywhere in their writings a personality dynamic that would account for the position of the House in the sequence. It is strongly suspected, therefore, that they do not have any explanation, in terms of subject dynamics, of

³⁴ Murray, Op. Cit.

why the drawn House should fall in between the drawn Person and the drawn Tree. One may be tempted to say that it looks almost as if they put the House in second place because it was the only place left. In point of fact, if the Person drawing reflects what is most conscious and the Tree drawing what is less conscious, there is only an in-between position left. Maybe this is the reason why Buck³⁵ could call the House a mixture and why Hammer³⁶ called it neutral. In any event, it is felt that the House drawing has been clinically neglected so to speak. This suspicion seems to be confirmed by Hammer's own words: "Focus has been given to the Tree and Person because they represent extremes, prognostically more fruitful for comparison."³⁷ As the Tree and the Person are prognostically more interesting to the clinician, they have been focussed upon, and more data on these drawings are now available. Or could it be that from the very start the House was sort of left out because the Tree and the Person appeared to represent extremes? Hammer's statement then could be reformulated as follows: the Tree and the Person are prognostically more fruitful for comparison because focus has been given to these two drawings as they seemed to represent

35 Buck, "The Quality of the Quantity of the H-T-P", p. 355.

36 Hammer, Op. Cit., p. 166.

37 Ibid., p. 630.

extremes. Of course, it could be said that Buck has made an attempt to justify dynamically the in-between position of the House where he stated: "The House, [...] seems to arouse a mixture of conscious and unconscious associations [...]."³⁵ But then again, he has not said anywhere why the House arouses this mixture of associations in the subject.

In conclusion, the several considerations made in sections two, three and four, have pointed up, on the theoretical level, various weaknesses and shortcomings in the justification of the personality dynamics underlying Hammer's assumed P-H-T sequence. In the next section then is shown how this sequence stands up on the experimental level.

5. Experimental Research Evidence.

Unfortunately, the research literature does not report any studies that have tackled this sequence problem directly. Four projects have touched upon it indirectly. Their findings will now be considered.

Dussault³⁹ investigated the different levels of consciousness claimed by Buck and Hammer to be reflected in

³⁸ Buck, "The Quality of the Quantity of the H-T-P", p. 355.

³⁹ Claire Dussault, Concepts de Soi et Niveaux de Conscience reflétés par les Dessins du H-T-P, thesis presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1965, vi-98 p.

the H-T-P drawings. The results made her conclude that, for her subjects, there was no reason to believe that the H-T-P drawings reflect different levels of consciousness of the self. Moreover, her data did not lead to the P-H-T sequence. In relation to the actual self of her subjects, she found the sequence to be Person, Tree, House. For the ideal self the sequence turned out to be Tree, Person, House. In the latter sequence none of the drawn wholes follows the direction presumed by Hammer. In the former, the drawn Person is the only one in the presumed direction.

Machry⁴⁰ investigated the content and the expression in the H-T-P drawings. He interpreted his findings as meaning that drawings in which expressive elements are controlled give rise to fewer conflicting alternative interpretive hypotheses. He did not find Hammer's sequence either. What is more, he even found that the defensiveness caused by the strong stimulus-pull of the Person led to almost a denial of that drawing. The latter is a finding that does not agree with Buck's assumption that defensiveness leads to a more conscious self-portrait of the subject.

⁴⁰ John A. Machry, Self-Concept, Content and Expression in H-T-P Drawings, thesis presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, viii-139 p.

Zutterman⁴¹ investigated the different levels in the conscious self as judged on the H-T-P. The results were interpreted as meaning that it is possible for the clinician to distinguish different levels in the conscious self-concept of the subjects by means of their H-T-P drawings. From the data of this study sequences of the drawings on Hammer's conscious-unconscious continuum were set up. Six sequences were thus obtained, none following the order to be expected according to Buck's and Hammer's H-T-P dynamics. A second outstanding feature was that in all of these six sequences the drawn House ranked first.

Beauchesne⁴² attempted to verify experimentally the same hypothesis tested by Dussault and Zutterman, only she used non-sophisticated judges. Only one of the eight judges was reliable in his ratings and none of his results was significant. Consequently, most of the results were not interpreted, and the interpretable results did not allow for any definite conclusions. From the data of this study eight sequences of the drawings on Hammer's conscious-unconscious

⁴¹ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-36 p.

⁴² Monique Beauchesne, Rapport Entre Soi Phénoménologique et Soi Projété dans les Dessins du H.T.P., interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1967, viii-84 p.

dimension were obtained. One out of these eight showed the P-H-T sequence, the order to be expected according to Buck's and Hammer's H-T-P dynamics. Moreover, the difference between the distances concerning the Person and the Tree was significant at the .05 level. Unfortunately, the judge from whose ratings this P-H-T sequence was obtained could not be considered reliable according to the accepted criteria. However, besides the fact that seven out of these eight sequences did not show Hammer's assumed P-H-T order, they all had the House in the first position, including, of course, the sequence obtained from the ratings of the reliable judge.

6. Summary and Conclusions.

According to Buck, the author of the H-T-P, these three drawings arouse in the subject different degrees of conscious associations. He has then, therefore, further assumed that the three drawings reflect three different kinds of personality aspects of the drawer. Hammer has explicated, almost graphically, this idea by assuming a conscious-unconscious continuum along which the drawings can be located. Following Buck's drawing dynamics, he has stated that on this continuum the H-T-P drawings should rank in the following order: first the Person, then the House, and last the Tree.

In this chapter an attempt was made to verify whether this P-H-T sequence stands to reason on the dynamic theoretical

level and whether it has indeed been found in the data of experimental research. No known research project has investigated the validity of the P-H-T sequence directly. A few studies have referred to it indirectly, but none of the findings have confirmed Hammer's sequence. On the theoretical level, the personality dynamics as proposed by the authors have been found to be incomplete, at times unaccounted for, ambiguous and even conflicting.

The hunter returning empty-handed and claiming that there is no game in these woods may be rationalizing his poor skill. The fact that the P-H-T sequence has not as yet been experimentally verified does not disprove its validity. However, the weaknesses in its assumed underlying dynamics strengthen the suspicion of inadequacy in the present understanding of an H-T-P subject. Moreover, certain trends noticed in previous research and to be taken up later in this study, suggest the need and the possibility for a different dynamic approach to personality dynamics concerning the H-T-P. An attempt to formulate such a different approach is presented in the next chapter.

CHAPTER II

LEVELS OF CONSCIOUSNESS AND MEANING OF H-T-P DRAWINGS

The approach to personality dynamics of the subject taking the H-T-P test presented in this chapter is based mainly on two fundamental issues. One has to do with the different levels of psychic functioning in the individual taking the test. The other refers to the specific meaning the H-T-P drawings may have for the individual. Therefore, in a first section, the so-called levels hypothesis is discussed. Hammer's application of this hypothesis to the H-T-P is dealt with in the second section. The third section then attempts to show how Adorno's conception of the levels hypothesis could be applied to the H-T-P on the basis of the meaning of the drawings. The fourth section considers the self-concept in the light of Adorno's levels hypothesis as applied to this study. In a final section are presented the hypotheses which lie at the basis of the experimental design that attempts to verify the position taken in the third section.

1. The Levels Hypothesis.

Theorists have come to view personality as layered in different levels of psychic functioning. The concept of 'levels' or 'layers' in personality theory became so popular and so widely used in so many different ways and terminologies

that the literature in this area is now at a point where it is absolutely confused and confusing. Sanford¹ made a survey among psychologists to find out how is understood surface and depth in personality. The great diversity of structural, topographical and dynamic concepts used interchangeably gives a good picture of the current confusing situation.

Consideration of the concept of levels or layers, and the reflection of these different depths of personality structure in projective techniques, has interested many a writer. Among the earlier ones to bring this concept in connection with the field of projectives into the literature were Murray,² Rapaport³ and Eysenck.⁴ Of late, however, the level concept and its impact on projective techniques has moved into the center of clinical concern. One of the major theoretical controversies in the field of projective testing which has special relevance for the H-T-P revolves around what is called the 'levels hypothesis'. Stated most simply, this approach

1 Nevitt Sanford, "Surface and Depth in the Individual Personality", in Psychological Review, Vol. 63, No. 6, November 1956, p. 349-359.

2 Henry A. Murray, et al., Explorations in Personality, New York, Oxford University Press, 1938, 761 p.

3 David Rapaport, Diagnostic Psychological Testing, Chicago, Year Book Company, Vol. I and II, 1946, 573 p and 516 p.

4 Hans J. Eysenck, Dimensions of Personality, London, Kegan Paul, 1947, 308 p.

conceptualizes personality as arranged at various and different levels of psychic functioning and organization. Considering the significance of the levels hypothesis, there is unfortunately relatively little hard supporting empirical evidence. Murstein says in this regard: "[...] although the 'levels' approach appears intuitively tenable, no conclusive demonstration of the existence of discriminable levels has been made through experimental research."⁵ On the other hand, Carr^{6,7,8} has advanced the levels hypothesis to explain the apparent lack of congruity among data derived from different projective techniques. Hammer agrees with Carr when he says, rather poetically: "The projective drawing performance, then, is generally on notes lower than that of the Rorschach keyboard. Together they orchestrate a rounded theme of the essential diagnostic melody of the subject."⁹ Klopfer¹⁰ and

⁵ Bernard I. Murstein, Theory and Research in Projective Techniques, New York, Wiley, 1963, p. 67.

⁶ Arthur C. Carr, "Intra-Individual Consistency in Response to Tests of Varying Degrees of Ambiguity", in Journal of Consulting Psychology, Vol. 18, No. 4, August 1954, p. 251-258.

⁷ -----, "The Relation of Certain Rorschach Variables to Expression of Affect in the TAT and SCT", in Journal of Projective Techniques, Vol. 20, No. 2, June 1956, p. 137-142.

⁸ -----, "The Psychodiagnostic Test Battery: Rationale and Methodology", in Progress in Clinical Psychology, Vol. 2, 1958, p. 28-39.

⁹ Emmanuel F. Hammer, (Ed.), The Clinical Application of Projective Drawings, Springfield, Ill., Thomas, 1958, p. 629.

¹⁰ Bruno Klopfer, Mary D. Ainsworth, Walter G. Klopfer, and Robert R. Holt, Developments in the Rorschach Technique, New York, World Book Co., 1954, Vol. I, p. 377-378.

Schafer¹¹ may not sound as enthusiastic as Hammer, but they accept the levels hypothesis very definitely as applicable, not only within the Rorschach performance but also among different instruments of personality assessment.

2. Hammer's Application of Levels Hypothesis to H-T-P.

Buck, the author of the H-T-P, has never really referred to any one of the three drawings as reflecting one particular level of the subject's personality structure. He has made many vague, unclear and sometimes conflicting statements about this though. At one time he made the very unscientific statement:

Now, if there is one thing of which we are reasonably sure about the H-T-P, it is this: the H-T-P is a disturbing technique, since it arouses associations which are often quite unpleasant to the subject. That is, in a sense, validation of the argument that we are getting below the surface of the personality.¹²

Earlier during this workshop he gave the twelve major theoretical postulates upon which the H-T-P technique is based. Postulate four reads: "Each drawing is believed to arouse both conscious, subconscious and unconscious associations."¹³

¹¹ Roy Schafer, Psychoanalytic Interpretation in Rorschach Testing, New York, Grune and Stratton, 1954, p. 77-82.

¹² John Buck, Administration and Interpretation of the H-T-P Test. Proceedings of the H-T-P Workshop, Los Angeles, Western Psychological Services, 1950, p. 6.

¹³ Ibid., p. 4.

Still at the same occasion, he said: "[...] the Tree appears to give us an excellent portrait of the subject's subconscious appraisal of the Self in relationship to the environment in general."¹⁴ The drawing of the Person is thought to arouse in the subject the most conscious associations and is therefore assumed to give a more conscious self-portrait.¹⁵ The House is simply said to be regarded as a self-portrait.¹⁶ At no time known to this writer has Buck defined the terms conscious, subconscious and unconscious. Nor has he specified if the associations aroused in the subject are related exclusively to the subject himself, or if they are related to other individuals as well.

It was Hammer, most probably, who first applied explicitly the levels hypothesis to the H-T-P personality dynamics set forth by Buck. The personality dimension on which he situates the three drawings according to their corresponding level runs from conscious to unconscious. In Hammer's writings it is the Tree drawing that gets the greatest share of the author's attention. The two other wholes are usually discussed in order to make a comparative point

¹⁴ Ibid., p. 18.

¹⁵ Ibid., p. 9.

¹⁶ John Buck, "The H-T-P Technique. A Qualitative and Quantitative Scoring Manual", in Monograph Supplement No. 5, Journal of Clinical Psychology, October 1948, p. 4.

concerning the Tree. The drawing of the Tree is said to appear "to tap basic, more enduring and deeper intrapsychic feelings and self attitudes [...also] conflictful or emotionally disturbing negative traits and attitudes, [and it is] 'less close to home' as a self-portrait."¹⁷ The drawing of the Person "becomes the vehicle for conveying the subject's closer-to-conscious view of himself and his relationship with his environment."¹⁸ The drawing of the House gets the treatment of an afterthought: "In regard to the H-T-P's capacity for tapping different personality levels, the House appears to lie somewhere between the Person and the Tree on this particular continuum."¹⁹

As explained before in the previous chapter, the main dynamic process thought to be responsible for the P-H-T positioning on Hammer's personality continuum is defensiveness on the part of the subject. The degree of defensiveness experienced toward each drawing decides on the drawing's position on the continuum because it determines the degree of consciousness reflected in the drawing. As each drawing is assumed to arouse a different degree of defensiveness, Hammer recognizes three levels in his dimension. He did not

17 Hammer, Op. Cit., p. 630.

18 Ibid., p. 172.

19 Ibid., p. 630.

label them, but they can be described as the more conscious level, reflected in the Person, the less conscious level, reflected in the Tree, and the in-between level, reflected in the House.

3. Adorno's Levels Hypothesis Applied to H-T-P.

In a recent study²⁰ it was concluded that a skilled clinician can recognize different levels of consciousness in the H-T-P drawings. Hammer's application of the levels hypothesis to the H-T-P appears therefore admissable. However, the theoretical and experimental considerations presented in chapter one, make it look as if a levels hypothesis based on the process of defense cannot satisfy theoretically nor account for the facts. An approach focussing more on the meaning of the H-T-P drawings is therefore proposed.

That the H-T-P drawings do have different meanings to the subject has been supported by experimental evidence. Two studies included comparisons between signs appearing in the discrete wholes. The findings showed no significant relationship between the wholes. This was taken to indicate that each of the three wholes provided different meanings to the subject and served as different projective stimuli

²⁰ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-86 p.

patterns. Bieliauskas and Clarke²¹ found low intercorrelations of shading scores for individual H-T-P wholes. They interpreted their findings to suggest that shading has a different meaning in each drawing. Jolles and Beck²² observed sexual differences in vertical placement of the H-T-P drawings. Another of their findings was, however, that the stimulus value of each drawing differed significantly, suggesting that each of the three wholes had a different meaning to the subject. Another study, carried out by Diamond,²³ points to an underlying difference in meaning between the House and the Tree. The subjects in this experiment wrote stories about a tree and a person or about a house and a person. An adjective checklist was developed to evaluate the stories. Positive significant correlations between stories, if cross compared, showed low correlations. It was concluded that trees and houses played different roles in personality projection.

21 Vytautas J. Bieliauskas and Walter J. Clarke, "The Problem of Shading in H-T-P Drawings: Its Internal Consistency and Relation to Personality Characteristics", in Journal of General Psychology, Vol. 72, April 1965, p. 295-300.

22 Isaac A. Jolles and Harry S. Beck, "A Study of the Validity of Some Hypotheses for the Qualitative Interpretation of the H-T-P for Children of Elementary School Age: IV. Vertical Placement", in Journal of Clinical Psychology, Vol. 9, No. 2, April 1953, p. 164-167.

23 Solomon Diamond, "The House and Tree in Verbal Fantasy: II. Their Different Roles", in Journal of Projective Techniques, Vol. 18, No. 4, December 1954, p. 414-417.

Adorno and his associates²⁴ recognize three main dynamic levels in the psychic functioning of the individual. It is hypothesized here that these three layers are reflected in the H-T-P drawings.

a) Level I.- The first level contains opinions and attitudes which the subject would express publicly. In Jungian terminology it could be called the persona; a mask which is worn by the person in response to the demands of social convention and tradition. It refers to those aspects of personality which one displays to the world or which public opinion fastens on the individual.²⁵ It is an aspect of the self that has been constructed through the process of socialization and exists at the public level of its own psychic life. It is the public form of one's personality. It manifests itself in one's contact with others and, at the same time, is formed by those contacts. The main factor in its coming to existence and its persistence is relationship with others.

This first level of personality structure seems to find its behavioral counterpart and external expression in

²⁴ T.W. Adorno, Else Frenkel-Brunswick, Daniel J. Levinson and Nevitt R. Sanford, The Authoritarian Personality, New York, Harper, 1950, p. 3-5.

²⁵ Calvin S. Hall and Gardner Lindzey, Theories of Personality, New York, Wiley, 1962, p. 83-84.

what Rosenzweig²⁶ has called opinion behavior. He has found that in the psychodiagnostic situation subjects may respond at various levels of which three are usefully distinguished. The behavior he has characterized as opinion behavior is the most superficial of the three. On that level:

[...] the subject functions [...] according to a rather deliberately invoked standard of what he considers to be right or proper, appropriate or otherwise acceptable to himself or others [...] in the particular situation and if necessary, he may distort his original reaction tendencies to fit these opinions.²⁷

In order to clarify this level of behavior Rosenzweig gives an example from the T.A.T. He assumes a subject telling a story in which he has identified with a hero who is involved in some relationship to a mother figure and in which the mother is depicted as a very kind and generous person. He then states:

In such a production the subject may be functioning at Level I [opinion behavior] and reporting what he thinks is the socially approved conception of mothers - they are supposed to be kind and generous. In actuality he may be feeling and concealing considerable hostility toward his own mother.²⁸

26 Saul Rosenzweig, "Levels of Behavior in Psychodiagnosis with Special Reference to the Picture Frustration Study", in American Journal of Orthopsychiatry, Vol. 20, No. 1, January 1950, p. 63-72.

27 Ibid., p. 64.

28 Ibid., p. 67.

In other words, on this level of behavior, the individual tends to follow the opinions and the standards forced upon him by society and culture, sometimes even at the expense of his own personal feelings and opinions.

In this same article Rosenzweig says that the distinction which he makes on the level of behavior may have important systematic implications for an understanding of personality integration.²⁹ He may be implying that to his opinion behavior a corresponding level of psychic functioning may exist. Although the behavior he is referring to seems primarily verbal behavior, it appears quite reasonable to hypothesize that it may find its psychic origin and motivational source in a personality level like the first level described by Adorno and his colleagues.

If it can be assumed that Adorno's first level could find verbal expression in a projective technique like the T.A.T., one can ask the question how and where it could be expressed graphically in a projective technique like the H-T-P. The House drawing seems to be indicated. This drawing is considered by Buck³⁰ and Hammer,³¹ to give indications about the drawer's home-life, his intra-familial relationships

29 Ibid., p. 72.

30 John Buck, "The H-T-P Test", in Journal of Clinical Psychology, Vol. 4, No. 2, April 1948, p. 155.

31 Hammer, Op. Cit., p. 171.

his psychosexual adjustment, his contact with reality, and his accessibility. Diamond³² has published some research data which give support to the view that the House drawing's typical, though not invariable, symbolic role is linked with an individual's social and public life. He has devised some kind of a cross between the H-T-P and the T.A.T. in his thematic H-T-P procedure. In this procedure the subject is instructed to write a story in which there are three characters, a tree, a house, and a person. All of these characters, the subject is told, should have real personalities, the power of speech, and be able to communicate their thoughts to one another. The subject is further asked to let his story really tell what kind of a tree, house, and person the characters are, and how they feel about each other. Diamond concludes from his study that the Tree and the House have multiple potentiality as symbols, but that generally the House represents a symbol for socially established rules of conduct. A striking instance of this idea occurred in a female subject's story of a man who imagined he had a house and a tree living inside him. The tree objected that the house impeded its growth; and the house insisted that it was needed to hold the man straight. There are a number of other stories in which the Tree and the House represent conflicting ethical standards,

³² Solomon Diamond, "The House and Tree in Verbal Fantasy", in Journal of Projective Techniques, Vol. 10, No. 3, September 1954, p. 316-325.

with the Tree standing for free development of the individual, and the house for conformity to social expectations.

The above hypothesis and Diamond's support for it, have found experimental verification in the data of two studies mentioned earlier in chapter one. While investigating the validity of another H-T-P assumption, this writer³³ found that the clinical psychologists acting as judges consistently rated the House drawing closer in semantic distance to the subject's conscious self-concept than either of the two other drawings. This was interpreted to mean that the drawn House reveals to the clinician more the public part of a subject's personality than any of the other drawings. Beauchesne³⁴ in her study found that same consistent trend. Seven of the eight judges attributed to the House drawing a meaning that came closer to the one the subjects had given to their self-concept than the meaning they attributed to the drawings of the tree and the person. She considered this finding a possible confirmation of this writer's hypothesis.

To sum up. Considering the dynamic contents of the first level as conceived by Adorno, and considering Rosenzweig's observation of opinion behavior; also taking into account

33 Zutterman, Op. Cit., p. 65-66.

34 Monique Beauchesne, Rapport Entre Soi Phénoménologique et Soi Projeté dans les Dessins du H.T.P., interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1967, p. 59-60.

Buck's and Hammer's interpretation of the House drawing, and Diamond's, Zutterman's and Beauchesne's interpretations of their research findings: it appears dynamically justifiable to assume that, if the public personality is reflected in the H-T-P drawings, it should be reflected to a greater extent in the House than in the Person or Tree.

b) Level II.- The second level of psychic functioning in the personality recognized by Adorno and co-authors is the area of opinions and attitudes which the subject would express only to an intimate friend. They are dynamic contents which do not agree with the social or constructive form of the personality, and which therefore are relegated to what can be likened to Nuttin's³⁵ psychic intimacy or the 'intimate conscious'. As lived at a more intimate level of personal consciousness, personality is not absolutely identical with the personality which lives and unfolds in the realm of public and social life. It is the human being alone with himself. An individual, a child, very quickly realizes that a great number of psychic contents and many different kinds of behavior are not admitted into public life. Some may be admitted privately.

³⁵ Joseph Nuttin, Psychoanalysis and Personality. A Dynamic Theory of Normal Personality. New York. The New American Library, 1962, p. 206-207.

Rosenzweig³⁶ has found in his subjects a second level of diagnostic behavior which seems to correspond to this psychic intimacy. He has characterized it as overt behavior, and not as superficial as the first level, the opinion behavior. It is the individual's behavior when not consciously censored according to prevailing opinions. His hypothetical story teller on the T.A.T. would be functioning at this level, says Rosenzweig, if he stated what he experiences consciously and demonstrates observably in relation to his own mother.

As was the case with the first level, again it appears reasonable to hypothesize that this second level of behavior could be dynamically linked with the second level described by Adorno and his associates. And again, if one assumes that Adorno's second level could find expression in T.A.T. productions, why could it not be reflected in the H-T-P drawings? If it does, it is suspected to occur in the Person drawing. Of course, many aspects of the human figure drawing, as many aspects of the House and even the Tree, are also said to give information about the drawer's interpersonal relationships.^{37,38,39} But many more of the aspects of the

³⁶ Rosenzweig, Op. Cit.

³⁷ Buck, Administration and Interpretation of the H-T-P, p. 4.

³⁸ Hammer, Op. Cit., p. 172.

³⁹ Karen Machover, Personality Projection in the Drawing of the Human Figure, Springfield, Ill., Thomas, 1949, p. 40, 86, 129 and 144.

Person reveal how the drawer perceives himself, bodily and otherwise; how and what he feels and thinks, and how he feels and thinks when not in communication with others.^{40,41} The second level, or intimate personality, may therefore be assumed to be reflected in the drawn Person to a greater extent than in the drawn House or Tree.

c) Level III.- Adorno and his associates recognize a third level in the personality structure. As kept on this third level can be considered 'secret' thoughts. These are thoughts and dispositions the individual will under no circumstances reveal to anyone else if he can help it. From his earliest years man feels impulses which come into conflict with other dynamic forces, or with the image of man that has been crystallized in the customs and standards of his civilization. Some he may admit in private, but there are others which must never be expressed or reveal their existence at all. It may also be thoughts which he does not express because they are so vague and ill-formed that he cannot put them into words or which he cannot admit to himself. He can be aware of them, but does not usually keep them in the focus of his awareness. This area, or level of awareness, was

⁴⁰ Hammer, Op. Cit., p. 101-110, and p. 195-201.

⁴¹ Machover, Op. Cit.

called by Wyatt⁴² a deeper, more primary, and less differentiated level of experience. Its content comprises possibly the feelings and attitudes which Hammer⁴³ has called deeper, forbidden and negative.

This third psychic level seems to correspond to the third behavior level Rosenzweig⁴⁴ found his subjects to respond at. He states that the methods to measure these three levels of behavior differ in the superficiality or depth of their product. The third level behavior, which he has termed implicit behavior, is according to him the deepest product. This level he says:

[...] includes reactions which in their full significance are usually denied expression (sometimes through conscious censorship, more often because of deeper-lying forces) but which achieve some partial or symbolized manifestation under favorable conditions.⁴⁵

For his example in a T.A.T. story on this level, the author states:

If valid at Level III, the story would be revealing tender feelings of attachment, possibly even incestuous, toward a mother whom in real life the subject might reject with considerable hostility.⁴⁶

⁴² Frederick Wyatt, "The Case of Greger: Interpretation of Test Data", in Journal of Projective Techniques, Vol. 13, No. 4, December 1949, p. 468.

⁴³ Hammer, Op. Cit., p. 172.

⁴⁴ Rosenzweig, Op. Cit.

⁴⁵ Ibid., p. 64.

⁴⁶ Ibid., p. 67.

As in the case of the first and second levels, it again seems reasonable to assume that Rosenzweig's third level of behavior may originate from Adorno's third level of psychic functioning in the personality. The next assumption then is, of course, again that Adorno's third level could possibly find expression in the H-T-P drawings as well. And if it could, it is hypothesized that it would be expressed in the Tree drawing to a higher degree than in either of the two other wholes. For, the Tree drawing is said to be the most appropriate of the three wholes to reflect the impression the subject has of his relation with the environment.^{47, 48, 49, 50} This is so because that impression is fundamentally based upon and rooted in the individual's feeling of intrapersonal equilibrium.⁵¹ The structural elements of a tree, and also a tree as a whole, appear for the subject to have the meaning of powers and impulses organized to a more or less balanced system functioning in the environment. The

⁴⁷ Buck, Administration and Interpretation of the H-T-P Test, p. 4 and 18.

⁴⁸ Ada Abraham, Le Dessin d'une Personne. Le Test de Machover, Neuchâtel (Switzerland), Delachaux et Niestlé, 1963, p. 157-158.

⁴⁹ Hammer, Op. Cit., p. 181-195.

⁵⁰ Charles Koch, Le Test de l'Arbre, Lyon, Emmanuel Vitte, 1964, p. 39-42.

⁵¹ Buck, "The H-T-P Technique: A Qualitative and Quantitative Scoring Manual", p. 75.

roots of the Tree are taken to refer to the basic elementary impulses,⁵² and the tree trunk seems to correspond to the subject's feeling of basic undifferentiated power. The branches, their dimensions and their spatial relation to the trunk and the page, symbolize the resources the subject has at his disposal in his search for satisfaction.

Diamond⁵³ found in his study, already mentioned in connection with the first level and the House, that the Tree offers itself readily as a symbol for a 'Natural Force'.

The literature on projective drawing techniques abounds of speculations why the Tree drawing should reflect deeper personality layers than any other projective drawing. Experimental evidence for that assumption is not so abundant. Two research projects seem to lend support to the speculations and therefore also to the assumption that Adorno's third level might be represented to a greater extent by the Tree than by the House and Person. Cassel et al.⁵⁴ administered the H-T-P under two different conditions to two groups of adult job applicants. Group I with seventy-two subjects took the H-T-P while the examiner was absent. Group

⁵² Koch, Op. Cit., p. 132-136.

⁵³ Diamond, Op. Cit., p. 323.

⁵⁴ Robert H. Cassel, Anna P. Johnson and William H. Burns, "Examiner, Ego Defense and the H-T-P Test", in Journal of Clinical Psychology, Vol. 14, No. 2, April 1950, p. 157-160.

II with fifty-eight subjects took the H-T-P with the examiner present. Findings show more significant interpretable features in all drawings made by Group I, indicating that the presence of the examiner influences test outcome. Since the greatest differences appeared in the drawings of the Tree, it was concluded that the Tree represents a deeper level of personality integration than do drawings of House or Person.

Orgel⁵⁵ explored the relationship and correlation between the degree of social acceptance as shown on a sociogram of children's peer group relationships and their rated social adjustment as reflected in the H-T-P. She found that the drawn Tree did not correlate, where the drawn House and Person did. This was explained on the basis of Buck's and Hammer's hypothesis that the Tree yields a more subconscious projected self-portrait, whereas the sociogram taps feelings closer to the surface.

The above considerations and research data seem to make acceptable the hypothesis that the Tree could be the drawing in which Adorno's third level could be expressed to a higher degree than the two other drawings.

Before proceeding further a remark should be made concerning the dynamic conception of the here accepted idea

⁵⁵ Rita G. Orgel, "The Relationship of the H-T-P to a Sociometric Evaluation of a Group of Primary Grade School Children in Determining the Degree of Social Acceptance", in Journal of Clinical Psychology, Vol. 15, No. 2, April 1959, p. 222-223.

of psychic functioning and organization as proposed by Adorno and his colleagues. For purposes of exposition it is possible and desirable to delineate these three levels of consciousness and to separate them from each other with a certain degree of cogency. In the actual functioning of the person, the levels are apt to mingle and perhaps merge to a degree that defies analysis. This applies analogously to the drawings. The position adopted for this study does not hold that one particular drawing reflects one specific personality area only. It advocates the dynamic conception of overlapping. Any one of the drawings may very well reveal contents of all layers of personality, although it is very doubtful that the whole person manifests himself in one projection.⁵⁶ Maybe only certain layers are revealed in each drawing, but in this study one layer is assumed to be predominantly present. On the other hand, this interpretation does not imply that the H-T-P drawings give an exhaustive account of all possible views of the self. Furthermore, this interpretation does not assert that from the H-T-P drawings the clinician cannot make hypotheses and inferences concerning the drawer's unconscious dynamics.

⁵⁶ Koch, Op. Cit., p. 18.

4. House-Person-Tree Sequence and the Self.

Subscribing to Buck's perception of the dynamic functioning of the subject drawing the H-T-P wholes, Hammer had to accept that on a conscious-unconscious continuum the order of the drawings should be: Person - House - Tree. However, according to the various assumptions and hypotheses presented in the previous section, on a continuum similar to Hammer's a different order of the drawings is expected. Subscribing to an approach considering primarily the difference in meaning the different H-T-P drawings appear to have for the subject the sequence on the continuum may be predicted to be: House - Person - Tree.

An important remark should be made at this point. It has to do with Hammer's conscious-unconscious dimension and the exact position of the three drawings along this dimension. As far as the House is concerned Hammer has been pretty vague. He stated: "[...] the House appears to lie somewhere between the Person and the Tree [...]." ⁵⁷ Literally that could mean: anywhere between the Person and the Tree. Anywhere from right in the middle between the two to close to either one. The Person and the Tree represent extremes according to Hammer, but he has not explicitly stated whether this means that each one takes one of the two extreme

⁵⁷ Hammer, Op. Cit., p. 630.

positions on the continuum. He says that: "[...] the drawn Person becomes the vehicle for conveying the subject's closer-to-conscious view of himself and his relationship with his environment."⁵⁸ Using Hammer's cautious way of expression, this could be taken to mean that on the continuum the Person appears to lie somewhere on the conscious end. As far as the Tree is concerned, the author's writings are full of very hesitant and never clearly defined expressions. This drawing is assumed to reveal the subject's relatively deeper feelings, more unconscious feelings, subconscious feelings, less conscious feelings, more basic feelings, feelings about the self residing at a more primitive personality level, and the like. After careful consideration of these expressions in their proper context, it is felt safe to assume that Hammer means to say that the drawn Tree reflects aspects of the subject's self which on the continuum conscious-unconscious are ordinarily farther away from the conscious pole than the self-aspects reflected by House or Person. This implies that the self-aspects reflected in the Tree are not necessarily unconscious, although they may emerge from a personality level that is not as close-to-surface as the levels involved with House or Person. A later writing of Hammer's⁵⁹ suggests even that the author is now inclined to think that the Tree does not reveal as deep a personality level as he initially

⁵⁸ Ibid., p. 172.

⁵⁹ Ibid., p. 206-235.

may have assumed it did. All what has been mentioned about the H-T-P up till now had to do with the achromatic H-T-P (pencil). Hammer's writing in question treats of the chromatic H-T-P (crayon). He now seems to consider the achromatic drawing phase as preparatory in order to get at the subject's really deep--unconscious?--level. In point of fact, he says that in the chromatic phase the subject "is provided [...] with an opportunity to express symbolically [...] the emotions which have been aroused by the achromatic series and Post-Drawing-Interrogation."⁶⁰ And again he says:

By the time he [the subject] is asked to enter the chromatic phase, he may be psychologically in a more vulnerable position, with his conflicts stirred up, his emotions aroused and, as is the case with some subjects, his defenses ajar. It is through this chink in his armor that the chromatic phase penetrates.⁶¹

Hammer, however, says explicitly that the chromatic drawings reflect a deeper personality level than the achromatic:

"The chromatic H-T-P cuts through the defenses to lay bare a deeper level of personality than does the achromatic set of drawings."⁶² and "The chromatic drawing phase strips away the closer-to-conscious personality layers; it more easily

⁶⁰ Ibid., p. 210.

⁶¹ Ibid., p. 231.

⁶² Ibid., p. 208.

raises the deeper layers of the unconscious to eye-level."⁶³ The latter quotation implies even that it is difficult for the achromatic phase to reach beneath the conscious personality layers. But the author goes still further. After having presented a few cases comparing the chromatic to the achromatic drawings, he concludes that the "cases have been presented to carry the thesis that the chromatic level brings forth the deeper personality picture, as a rather direct contrast to the achromatic level."⁶⁴ Of course, he says that it is only a thesis, but a direct contrast to a deeper personality picture must mean a shallow, close-to-conscious, personality picture.

The above reflections seem to justify the following conception of Hammer's conscious-unconscious continuum in regard to the achromatic H-T-P drawings.⁶⁵ According to the self-aspects they reflect, the three drawings can be located along an imaginary personality dimension that runs from a high degree of consciousness at one extreme to a lower degree of consciousness at the other. The rank order on the dimension is assumed to be, first the House, then the Person, and last the Tree. However, it is possible for this

⁶³ Ibid., p. 230.

⁶⁴ Ibid., p. 223.

⁶⁵ From this point on H-T-P will again indicate the achromatic phase.

triad to be located anywhere along that continuum. It is further assumed that the self-concept of the subject lies in the origin of the continuum. By the self-concept of the subject is meant his own conscious rating of his self. In other words, the last two assumptions hold that when a subject is asked to rate his self-concept he will give these aspects of his self which are most conscious and public rather than the more private and intimate aspects. However, in his H-T-P drawings he will give both according to the meaning of each particular drawing.

When a subject, in the setting of an experiment, is asked to describe himself, it is most probable that he should avoid the two deeper Adorno levels. He will probably be inclined to describe his public and social personality, and leave untouched the more intimate contents of his psychic life. In most experimental studies the subjects are usually promised personal anonymity in order to get their maximum involvement. It would be difficult to assess what the precise effect of anonymity is on the degree of involvement and motivational set. However, it is assumed here that personal anonymity in a study like this one elicits in the subjects a similar anonymous response which leads to ratings of predominantly the public self. Another reason for assuming that subjects tend to consider their public self in their ratings

is provided by Lazarus.⁶⁶ In the third section of the previous chapter the possibility was discussed of subjects controlling quite consciously their behavior on projective techniques. Most of the studies mentioned there used subjects recruited from a college population. Lazarus has made the comment that the ambiguity and lack of stimulus structure of projective techniques alerts this type of subjects. They fear that what they say or do may somehow be held against them. Accordingly, says Lazarus, the resulting product is often most consistent with the 'public self'.

A subject's self-concept in this study is operationally defined as the manner in which the subject rates himself or herself on the fifteen semantic scales used in the project. It is obvious then that this measure is limited to conscious aspects of self and only those which each subject will expose. This conscious self-concept could otherwise be defined as the individual who is known to himself.⁶⁷ The individual knows himself in many different ways and, therefore, the self-concept cannot be considered as a unitary concept. It could even be said that the individual has many

⁶⁶ Richard S. Lazarus, "Ambiguity and Non-Ambiguity in Projective Testing", in Journal of Abnormal and Social Psychology, Vol. 48, No. 3, July 1953, p. 443-445.

⁶⁷ Ruth C. Wylie, The Self Concept. A Critical Survey of Pertinent Research Literature, Lincoln, University of Nebraska Press, 1961, p. 1.

selves and that the self-concept is a configuration of these.⁶⁸ Wrenn has even said that:

[...] an individual has many self concepts, not just one. In an atomistic sense he has a self concept for every situation in which he finds himself. More realistically there is probably a strong core to this multitude of self concepts so that a person can be said to have a fairly consistent hierarchy of selves - such as the perceived self, the self that he thinks others believe him to be, and the ideal self that he would like to be.⁶⁹

In the recent research carried out in the area of self psychology one finds time and again that the projects are geared toward a better understanding of the actual self and ideal self, and their interrelationship.⁷⁰ Obviously, those researchers must consider the actual and ideal self as more important aspects of the self-concept than, for instance, the least liked and the most liked selves. This importance given to actual and ideal self may be due partly to the emphasis they have been given on the level of personality dynamics in the context of psychotherapy. Several

⁶⁸ John J. Brownfain, "Stability of the Self Concept as a Dimension of Personality", in Journal of Abnormal and Social Psychology, Vol. 47, No. 3, July 1952, p. 597.

⁶⁹ Gilbert C. Wrenn, "The Self Concept in Counseling", in Journal of Consulting Psychology, Vol. 5, No. 2, Summer 1958, p. 104.

⁷⁰ Wylie, Op. Cit., 390 p.

authors^{71,72,73} have considered the degree of actual - ideal discrepancy as a gauge of adjustment.

In his H-T-P manual Buck says "that each of the drawn wholes (House, Tree, and Person) is to be regarded as a self-portrait [...]."⁷⁴ However, when he comes to that section in the manual where he draws deductions concerning the subject's concepts of himself, only the Person is said that it may represent the subject as he is now (actual self) and as he would like to be (ideal self), not the House and the Tree. Besides, it is not clear if the author means that the Person represents either the actual self or the ideal, or if both can be represented simultaneously.⁷⁵ This question was touched upon in a study by Kamano.⁷⁶ He interpreted his findings to mean that the Person represents the actual self more than the ideal. It should be noted though that Kamano's

71 Carl Rogers, Client Centered Therapy, New York, Houghton Mifflin, 1951, p. 140-141.

72 Karen Horney, "Neurosis and Human Growth", in The Collected Works of Karen Horney, New York, Norton, 1950, p. 366-378.

73 Viktor E. Frankl, Man's Search for Meaning: An Introduction to Logotherapy, Boston, Beacon Press, 1959, p. 106.

74 Buck, "The H-T-P Technique: A Qualitative and Quantitative Scoring Manual", p. 4.

75 Ibid., p. 72-76.

76 Dennis K. Kamano, "An Investigation of the Meaning of Human Figure Drawing", in Journal of Clinical Psychology, Vol. 16, No. 4, October 1960, p. 429-430.

subjects were forty-five schizophrenic women, and that he did not apply the semantic differential technique strictly according to the recommendations of its authors. Pickering⁷⁷ tried to solve the same problem. She used normal subjects. She concluded from her findings that the Person represents both actual and ideal self, and the ideal somewhat more than the actual.

It took Hammer, once again, to elaborate on and make more explicit Buck's original theoretical conjectures. He has stated:

Some subjects tend to project themselves as they experience themselves to be, while other subjects tend to project themselves as they wish to be. The idealized version of the self is an integral component of the self-concept and is necessary in describing personality. It is not the chaff, to the real self as wheat. In actual clinical context, most drawings are neither one nor the other but actually represent a fusion of both the realistic perceptions of one's self and the ego ideal.⁷⁸

Hammer is saying in this quotation that most drawings represent a fusion of actual and ideal self. Unfortunately, he does not say which drawings. Most human figure drawings? Or most projective drawings? The context does not clarify

⁷⁷ Fern Pickering, The Figure Drawing and the Phenomenon of Projection, thesis presented to the School of Psychology and Education, University of Ottawa, Ontario, 1963, ix-63 p.

⁷⁸ Emanuel F. Hammer, "Critique of Swensen's 'Empirical Evaluations of Human Figure Drawings'", in E.I. Marstein, (Ed.), Handbook of Projective Techniques, Basic Books, New York, 1965, p. 553.

this issue completely, but the human figure drawing is certainly included. Therefore, according to Hammer, the Person reflects necessarily both actual and ideal self. As for the House and the Person the same possibility is there. Recently then, Dussault⁷⁹ went a step further than Kamano and Pickering, and investigated which self-concept was reflected in all three drawings. She concluded that in all three H-T-P drawings of her normal subjects the actual self was significantly more represented than the ideal self.

The above reflections concerning the self-concept and its reflection in the H-T-P drawings may be summarized as follows. The self-concept is a multi-dimensional concept. The actual and ideal self are very much in the fore in research and theory. Both actual and ideal self are reflected in the H-T-P, possibly simultaneously in each one of the drawings. It should be clear, therefore, that the actual self and the ideal self are both to be taken into consideration where the self-concept becomes the object of an investigation concerning the H-T-P.

79 Claire Dussault, Concepts de Soi et Niveaux de Conscience reflétés par les Dessins du H-T-P, thesis presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1965, vi-98 p.

5. Summary and Hypotheses.

It was discussed how Hammer applied the levels hypothesis to the H-T-P drawings. This applicability was found acceptable. However, a levels hypothesis based on the process of defense was found unsatisfactory, and therefore another approach was suggested. This approach is based on the difference in meaning the different H-T-P drawings appear to have for the subject. These meanings were exposed and linked up with a triple personality structure proposed by Adorno and associates. It appeared dynamically justifiable to assume that the public personality would be reflected to a greater extent in the House than in the Person or Tree; the intimate personality to a greater extent in the Person than in any of the other wholes; and the most private level of personality to a greater extent in the Tree than in either of the two other wholes. As a consequence, on a personality dimension of consciousness the H-T-P drawings are expected to rank in the order: H - P - T, and not P - H - T as Hammer proposed. Finally, the subject's self-concept assumed to be in the origin of this personality dimension, the experimental hypothesis of this study reads as follows: the meaning of the drawn House is significantly closer to the meaning of the conscious self-concept than the meaning of the drawn Person and Tree, and the meaning of the drawn Person is significantly

closer to the meaning of the conscious self-concept than the meaning of the drawn tree.

For experimental and statistical verification this experimental hypothesis is subdivided in the following null hypotheses.

a) There is no significant difference between the distance from the actual self of the subject as rated by judge by means of the House to the actual self as rated by the subject, and the distance from the actual self of the subject as rated by judge by means of the Tree to the actual self as rated by the subject.

The corresponding sub-hypothesis concerning the ideal self is as follows:

b) There is no significant difference between the distance from the ideal self of the subject as rated by judge by means of the House to the ideal self as rated by the subject, and the distance from the ideal self of the subject as rated by judge by means of the Tree to the ideal self as rated by the subject.

For brevity's sake and ease of reading, this abbreviated formulation was preferred:

a) There is no significant difference between the distance $A.S.JH - A.S._s$ and the distance $A.S.JT - A.S._s$.
b) There is no significant difference between the distance $I.S.JH - I.S._s$ and the distance $I.S.JT - I.S._s$.

In these abbreviated forms A.S._{JH} and I.S._{JH} stand respectively for actual self and ideal self of the subject as rated by judges by means of the drawn House. The subscript JT and JP in the following hypotheses similarly stand for: as rated by judge by means of the drawn Tree and Person.

The subscript s means: as rated by the subject himself.

Here then follow the remaining hypotheses in abbreviated form:

- c) There is no significant difference between the distance A.S._{JH} - A.S._s and the distance A.S._{JP} - A.S._s.
- d) There is no significant difference between the distance I.S._{JH} - I.S._s and the distance I.S._{JP} - I.S._s.
- e) There is no significant difference between the distance A.S._{JT} - A.S._s and the distance A.S._{JP} - A.S._s.
- f) There is no significant difference between the distance I.S._{JT} - I.S._s and the distance I.S._{JP} - I.S._s.

For each of the three drawings the degree of nearness or removedness of its meaning in respect to the conscious meaning of the self as rated by the subjects by means of their actual and ideal self ratings will be determined. The drawing that is closer in meaning will be considered to reflect the closer-to-surface areas of the self-concept to a higher degree than either of the other two drawings. On the other hand, the drawing that is farthest away in meaning will be considered to reflect the deeper areas of the

self-concept to a higher degree than either of the other two drawings.

The experimental design for testing the hypotheses is presented in the next chapter.

CHAPTER III

EXPERIMENTAL DESIGN

This chapter describes the experimental procedures which were devised and implemented in order to test the hypotheses of this project. In the first section the sample is discussed. The second section that treats of the role played by the judges is subdivided into three parts. The first part shows why judges were used for this study; the second part, what the criteria were for choosing these judges; the third part, what the judges' task was. The third section of the chapter presents the semantic differential. It shows why this particular technique was chosen, how reliable and valid it is, and how it was adapted to the requirements of the present research problem. The experimental procedure is described in the fourth section, and the way the data were analyzed is presented in the final section.

1. The Sample.

The subjects who made up the sample for this experiment are the same ones who took part in the pilot study to this project.¹ They were all college undergraduates taking

¹ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-36 p.

extension courses and enrolled in an introductory course in psychology. Fifty-nine were students of the Faculty of Arts at the University of Ottawa, and thirty-three students of St. Patrick's College in Ottawa. Thus, the sample was actually comprised of two groups, each coming from a different source. It was, therefore, necessary to determine statistically if, in relation to the variables under study, the subjects of the two groups could be considered as coming from the same population. The mean scores for both actual and ideal self, per group, were obtained, and the significance of the difference between these means tested. The results are reported in Table I. There is no significant difference between the means of the two groups. These can therefore be considered as one.

The subjects, as a group, were assumed to be normal. The criterion for normalcy adopted was the fact that they were not hospitalized. It was believed not to be necessary to check on their being normally adjusted. For, the experimental design of this project, being of the complex response identification type,² did not call for a comparison of the sample with any other group of subjects.³ There were forty-nine

² Benton J. Underwood, Psychological Research, New York, Appleton-Century-Crofts, 1957, p. 63.

³ Ibid., p. 129.

Table I.-

Significance of Difference Between Mean Scores of the Ottawa University Group (N=59) and the St. Patrick's College Group (N=33) on Actual Self and Ideal Self.

Concepts	M^a	M^b	D	σ_D	$\frac{D}{\sigma_D}^c$
Actual Self	59.56	61.00	1.44	.94	.02
Ideal Self	61.04	60.12	.92	1.20	.77

a Mean of Ottawa University group.

b Mean of St. Patrick's College group.

c $\frac{D}{\sigma_D} \geq 2.58$ for $p < .01$.

female and forty-three male subjects. Their ages ranged from sixteen years and 5 months to fifty-four years and 7 months.

These three characteristics of the sample, the subjects' educational level, their age and their sex, will now be discussed in perspective of the instruments used in this experiment, the H-T-P and the semantic differential.

After ten years of study and clinical usage Buck⁴ finally published a manual for qualitative and quantitative scoring of the H-T-P. The original quantitative standardization population consisted of 140 white adults, seventy male and seventy female. An adult was arbitrarily defined as an individual who was at least fifteen years of age. The age ranged from sixteen years to forty-eight years and 4 months. Part of the sample consisted of college students. The qualitative standardization population consisted of 150 adults. No age range is mentioned. Because of his definition of an adult, it is assumed that it was approximately the same as for the quantitative standardization group. The sample of this present experiment with its almost equal distribution of male and female subjects between the ages

⁴ John Buck, "The H-T-P Technique. A Qualitative and Quantitative Scoring Manual", in Monograph Supplement No. 5, Journal of Clinical Psychology, October 1948, 120 p.

of sixteen and fifty-four seems to correspond quite closely to the population on which the H-T-P was standardized.

The research background of the semantic differential as reported by the authors of the technique, does not contain much specific information about the samples employed.⁵ In more than one instance college students were used. The subjects therefore were adults with at least a high school education. No information is provided though about the age range nor the sex of the subjects. Most of the research projects, carried out using the semantic differential before its formal introduction in the literature, also used college students as subjects. This tendency to employ college students as subjects in studies concerning the semantic differential probably finds its explanation in the same reason why for this experiment college undergraduates were chosen. The choice fell on this particular type of subject because it corresponds to the samples used in the major factorial studies of the semantic scales. The authors used college undergraduates for the factor analyses for the simple reason that these were more readily available. They find some advantages in this choice though:

⁵ Charles E. Osgood, George J. Suci, Percy H. Tannenbaum, The Measurement of Meaning, Urbana, University of Illinois Press, 1957, p. 20-25.

[...] such subjects are probably more representative of the sorts of populations that will be used in most applications of the final instruments; having a higher average intelligence they probably yield a clearer picture of the most finely differentiated semantic space.⁶

As the sex and the age range of the subjects of the factorial and most of the other studies is not mentioned, it is assumed that the samples comprised both male and female subjects within an age range of a usual college undergraduate population. The age range of the sample of this study is probably somewhat wider than that, due to the fact that the subjects were people taking extension courses. However, age may not be a relevant factor for influencing significantly semantic differential ratings.⁷ Also, there is no experimental evidence available to prove that the connotative meaning of concepts, as measured by the semantic differential, changes past the more usual college age bracket.⁸ Moreover, it was felt that this sample's heterogeneity, at least as far as age is concerned, could be beneficial to this first global testing of the hypotheses.

⁶ Ibid., p. 32.

⁷ Charles Neuringer, "Effect of Intellectual Level and Neuropsychiatric Status on the Diversity of Intensity of Semantic Differential Ratings", in Journal of Consulting Psychology, Vol. 27, No. 3, June 1963, p. 280.

⁸ Howard E. Malts, "Ontogenetic Change in the Meaning of Concepts as Measured by the Semantic Differential", in Child Development, Vol. 34, No. 3, September 1963, p. 667-674.

The characteristics of this sample were judged to be in accord with the above discussed characteristics of both the H-T-P and the semantic differential.

2. Judges.

a) Use of Judges.- The crucial feature of this study is to be able to determine the difference in meaning the three H-T-P drawings have for the subjects. The obvious way would be to ask them, by means of a rating technique for example. There is, however, considerable doubt about the suitability of the subject as judge of his own drawings when the semantic differential technique is used. These doubts stem from the following suggestions and facts.

Investigating the meaning of the human figure drawing, Kamano⁹ came to the conclusion that the drawn Person reflects the self-concept. This conclusion was based on a significant relationship between his subjects' ratings of their drawings and their ratings of their actual selves. However, Pickering¹⁰ felt that this relationship did not allow him to infer that the subjects were in fact drawing

⁹ Dennis K. Kamano, "An Investigation of the Meaning of Human Figure Drawing", in Journal of Clinical Psychology, Vol. 16, No. 4, October 1960, p. 429-430.

¹⁰ Fern Pickering, The Figure Drawing and the Phenomenon of Projection, thesis presented to the School of Psychology and Education, University of Ottawa, Ontario, 1963, p. 12-13.

themselves. According to Pickering, it is possible that his subjects may have been projecting some aspect of themselves into their drawing, not while drawing it, but while rating it, much in the same manner a subject projects into the Thematic Apperception Test figures. Pickering, exploring projection in the drawing of a Person, noticed the very same kind of projection with the subjects of her own study.¹¹ She found that a subject, when asked to draw a person, does, in certain respects, draw himself. When asked to evaluate his drawing though, he, to some extent, projects himself into his rating. As a result, the Person drawn by the subject and the Person rated by the subject are two different things. Pickering's subjects distorted the original picture they gave of themselves while rating it.

Murstein¹² seems to be in agreement with Pickering's suspicion that the rating of drawings on the semantic differential could be considered as a type of projective behavior that may result in non-authentic self-reports. He points out that there is considerable evidence in a number of experiments indicating subjects often could and in fact did control the meaning of their responses. In other words, the possibility exists that, when a subject reports on his drawings,

¹¹ Ibid., p. 51-52.

¹² Bernard I. Murstein, (Ed.), Handbook of Projective Techniques, New York, Basic Books, 1965, p. xv.

he may attempt, and even succeed, in presenting another meaning than the one his drawings actually have for him.

The subjects in Dussault's study¹³ were asked to rate on semantic differential scales the meaning their drawings had for them. Some of her results made her suspect that the subjects forgot about the exact instructions and rated their drawings on the basis of the appearance instead. It may be seen then again that letting subjects evaluate their own drawings brings along an uncertainty as to what exactly is obtained. On the other hand, Dussault has also suggested that it may take an expert to hold both aspects of a drawing, its meaning and its appearance, completely separate while rating it.

The comments about Kamano's and Pickering's experiments, Marstein's comment about projective rating behavior, and Dussault's experience with her subjects, all seem to suggest the same thing. If a researcher using the semantic differential wanted to have an adequate picture of what aspects of his personality a subject has revealed in an H-T-P drawing, it may be preferable not to let the drawer himself report on it. More objective data may be obtained if an expert judge were called upon. But in the case where judges

¹³ Claire Dussault, Concepts de Soi et Niveaux de Conscience reflétés par les Dessins du H-T-P, thesis presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1965, p. 63.

are used, Pickering¹⁴ suggests that a particular aspect should be taken into account. This aspect could be quite relevant in an experiment as the one reported here. Pickering had recourse to judges, albeit for other reasons than the ones suggested here. In her study the subjects rated their figure drawings and the judges rated them too. All correlations between judges' ratings and subjects' ratings were significant at the .01 level. The author felt though that a significantly higher relationship between the judges' rating and the subjects' actual self rating would have resulted in more clear-cut evidence for the topic under investigation. This higher relationship, she felt, would probably have been reached had the judges rated the drawer instead of the drawer's drawing. She hypothesized that as the judges rated the drawing "at best, preconscious aspects of the subject's actual self may have been tapped."¹⁵ She is actually implying that, when judges rate the subject by means of his drawing rather than rate the drawing for its own merit, they are more likely to tap the phenomenal or conscious aspects of the self-concept.

That it might be desirable to have the judges rate the subject from his drawing rather than his drawing, may

¹⁴ Pickering, Op. Cit.

¹⁵ Ibid., p. 60.

find justification in another proposition besides Pickering's. According to Pickering and Murstein the subject may distort the perceived meaning of his drawing in the process of rating it. The question can be raised, therefore, if a judge may not be subject to a similar projective behavior on his part when he rates the subjects' drawings. There is no known experimental evidence for this conjecture, and a sophisticated rater could be assumed to be able to avoid this pitfall. However, doubt remains that this particular factor may have significant influence on the results of a study like the one reported here. If judges rate the subject and not his drawing, the doubt is removed.

These above ideas were tested in the pilot study to this present project.¹⁶ An experiment had been carried out by Dussault¹⁷ in an attempt to verify experimentally Buck's and Hammer's clinical observation that the H-T-P drawings reflect different levels of consciousness of the personality. The subjects had rated their own drawings. The findings were interpreted as not lending experimental support to that observation. The pilot study was devised in such a way that the only known variable on which it differed from Dussault's project was the introduction of judges. In Dussault's

¹⁶ Zutterman, Op. Cit.

¹⁷ Dussault, Op. Cit.

study the subjects themselves rated the meaning of their own drawings; in the pilot study this was done by clinical psychologists. The results led to the conclusion that it is possible for the clinician to distinguish different levels in the conscious self-concept of subjects by means of their H-T-P drawings. In other words, Buck's and Hammer's clinical observation was experimentally verified. As a consequence, it seems clearly indicated that the above ideas concerning subjects and judges are valid. Seen the purpose and nature of this present experiment, judges were employed.

b) Criteria for Choice of Judges.- An important question is whether judges can carry out drawing analyses in a reliable fashion.

Studies by Albee and Hamlin^{19,17} and a study by Lehner and Gunderson²⁰ showed that judges could reliably judge figure drawings. On the other hand, Tolor and Tolor,²¹

19 George W. Albee and Roy A. Hamlin, "An Investigation of the Reliability and Validity of Judgments of Adjustment Inferred from Drawings", in Journal of Clinical Psychology, Vol. 5, No. 4, October 1949, p. 389-392.

19 -----, "Judgment of Adjustment from Drawings: The Applicability of Rating Scale Method", in Journal of Clinical Psychology, Vol. 6, No. 4, October 1950, p. 363-365.

20 George F. Lehner and Eric K. Gunderson, "Reliability of Graphic Indices in a Projective Test (The Draw-A-Person)", in Journal of Clinical Psychology, Vol. 8, No. 2, April 1952, p. 125-128.

21 Alexander Tolor and Belle Tolor, "Judgments of Children's Popularity from their Human Figure Drawings", in Journal of Projective Techniques, Vol. 19, No. 2, June 1955, p. 170-176.

and Silverstein and Robinson²² concluded they could not. In these studies, however, certain conditions existed in the design that would suggest that important variables which could have influenced the results may not have been adequately controlled.

Among these sources of variability was the variation in methods used by the investigators. Albee and Hamlin tried global judgments and rating scales. Lehner and Gunderson applied the trait method. Tolor and Tolor used signs and some undefined listings of personality traits. Silverstein and Robinson employed signs, global judgments, and categorization. Rightly, Bieliauskas raises the question: "To what extent can combinations of scoring methods contribute to the factors which confuse the results when applied to human figure drawings administered according to one method?"²³ Unfortunately, he does not seem to have the answer to his own question.

Another source of variation is suspected to lie in the use of children as subjects. In studies by Goodenough

22 A.B. Silverstein and H.A. Robinson, "The Representation of Orthopedic Disability in Children's Figure Drawings", in Journal of Consulting Psychology, Vol. 20, No. 5, October 1956, p. 333-341.

23 Vytautas J. Bieliauskas, The House-Tree-Person (H-T-P) Research Review. A Bibliography and Research Review, Los Angeles, Western Psychological Services, 1963, p. 46.

and Harris,²⁴ and Machover²⁵ possible developmental factors, both in motor and personal adjustment areas, were frequently found in children's drawings. Tolor and Tolor, and Silverstein and Robinson used children in their studies. These were the studies whose results were mostly negative.

Still a third source might have been in the usual practice of selecting judges for the studies solely on the basis of some academic and/or experience factor. Pickering²⁶ concluded from her findings that psychologically experienced judges who knew techniques of figure-drawing analysis did no better in judging the drawings than naive and unsophisticated judges. Albee and Hamlin²⁷ concluded that nonpsychologists not experienced in projective techniques could make judgments of the figure drawings as reliably as the clinical psychologists used in the study. This would seem to indicate that some other factors were operating that might be only indirectly related to experience and knowledge of drawing analysis.

²⁴ Florence L. Goodenough and Dale B. Harris, "Studies in the Psychology of Children's Drawings: II. 1928-1949", in Psychological Bulletin, Vol. 47, No. 5, September 1950, p. 369-433.

²⁵ Karen Machover, "Human Figure Drawings of Children", in Journal of Projective Techniques, Vol. 17, No. 1, March 1953, p. 85-91.

²⁶ Pickering, Op. Cit., p. 26.

²⁷ Albee and Hamlin, Op. Cit.

Two studies in the counseling area serve as examples of such a phenomenon. Dipboye²⁸ discovered a tendency for counselor style to divide into affective and cognitive areas, and for counselors to respond differently to each area. Snyder²⁹ found further that counselors could be grouped according to whether their interview responses primarily concerned the content or affect of the client-counselor relationship. He also found that counselor style is not so much attributable to professional training as to the counselor's own personality and his readiness to use or not use any specific counseling technique.

As related to the use of drawings, these studies would suggest that judges might evaluate drawings more in the light of their professional orientation or leanings than in the light of their formal training and experience. This has been suspected to be the case in the above-mentioned pilot study.³⁰ One of the criteria for selecting the three judges used there was that all three had received their formal training and initial experience at the same training center. A comparison of their ratings showed that they had not evaluated

28 W.J. Dipboye, "Analysis of Counselor Style by Discussion Units", in Journal of Counseling Psychology, Vol. 1, No. 1, February 1954, p. 21-26.

29 William U. Snyder, "An Investigation of the Nature of Non-Directive Psychotherapy", in Journal of General Psychology, Vol. 33, July 1945, p. 220-223.

30 Zutterman, Op. Cit.

the drawings from the same point of view. If drawings can be evaluated in the light of the judge's professional orientation or in the light of his formal training, this would imply a potential variability in successfulness, particularly if one orientation is more conducive to effective or reliable drawing analysis. One orientation might be considered affective and involve an impressionistic or feeling approach to the drawings. The other orientation might be regarded as actuarial or cognitive, with a tendency to evaluate the drawings more in terms of specific signs or factors. A study by Schmidt and McGowan³¹ seems to indicate that 'affective' judges are significantly better than chance in judging drawings than 'cognitive' judges.

In the foregoing paragraphs three possible sources of variation in the studies concerning judge reliability in drawing analysis were considered. The first one was the variation in methods used. The second was suspected to lie in the use of children as subjects. The third had to do with the criteria for choosing the judges. The present study represents an attempt to control for them in the following manner. First, the design of the study makes use of the short-inspection type of drawing analysis. Also, the judges

³¹ Lyle D. Schmidt and John F. McGowan, "The Differentiation of Human Figure Drawings", in B.I. Murstein, (Ed.), Handbook of Projective Techniques, New York, Basic Books, 1965, p. 678.

were not told what aspects within the drawings to use for the basis of their ratings. The checklist violates the holistic, dynamically oriented approach. Secondly, the subjects for the study were adults. Thirdly, this time the judges were not selected on the basis of their formal training. An attempt was made to select them not only on the basis of experience and familiarity with drawings, but also on their professional or psychological orientation. Therefore judges were chosen among the psychologists employed in the same department of a single institution. Moreover, an attempt was made to identify each judge's feelings toward professional questions concerning the use of tests, attitudes toward drawings and psychotherapy style. The judges were three persons with degrees in clinical psychology and professional experience beyond the degree. Each had a basic knowledge of drawing analysis and experience in its use. Their general professional orientation was determined to be of the affective type.

c) Blind Analysis by Judges.- The task of the judges in this experiment was to rate the subjects from their H-T-P drawings. The judges did not have the Post-Drawing-Interrogation data, nor any record of detail sequence, nor any other kind of diagnostic material about the subjects at their disposal, except age and sex. It was a blind analysis.

Buck consistently rejects blind analysis of the drawings. He insists upon a comprehensive case history as basic to the fullest understanding of the subject's productions. However, in one study of a psychopathic personality in which he was asked to make a blind analysis, he states in the preamble:

The absence of (1) standard administrative procedure; (2) a Post-Drawing-Interrogation, and (3) any record of detail sequence, time consumed, the order in which the wholes were drawn, etc., emasculates this combination of House, Tree and Person, and makes a so-called blind analysis a relatively futile and even less scientific procedure than ordinarily. Nonetheless, since the drawings of these three objects have certain intrinsic diagnostic value, regardless of how they are obtained, an analysis has been attempted.³²

It is most interesting to see, however, how the resulting analysis agrees impressively with independent test data and a detailed clinical history.³³ This incident is instructive because it demonstrates that blind analysis of drawings, so widely used in research, is pragmatically defensible.

Machover is not as outspoken as Buck in regard to blind analysis. She says:

³² Anthony Snykal and Frederick C. Thorne, "Etiological Studies of Psychopathic Personality: II. Asocial Type", in Journal of Clinical Psychology, Vol. 7, No. 1, January 1951, p. 306.

³³ Ibid., p. 306-307.

Although 'blind' analysis technique is necessary for experimental verification of principles, and is frequently used by the writer, the clinical use of drawings as a diagnostic or therapeutic aid is most fruitful when the drawings are interpreted in light of all available case-history data.³⁴

Machover seems to have more confidence in the intrinsic value of drawings than Buck has.³⁵ Inadvertently, however, through the above-mentioned incident, Machover's confidence has been supported by Buck who otherwise takes an opposite view.

In another study of a case of marital discord, Buck³⁶ demonstrates in great detail the integration of test-derived data with the clinical history and other projective methods. However, Brown³⁷ claims that his independent analysis of the drawings and Post-Drawing-Interrogation indicates that deeper material could have been elicited without the support of the case history.

It would seem then that blind analysis of drawings has not only a specific value of its own in experimental

³⁴ Karen Machover, Personality Projection in the Drawing of the Human Figure, Springfield, Ill., Thomas, 1949, p. 104-105.

³⁵ Ibid., p. 35.

³⁶ John Buck, "The Use of the House-Tree-Person Test in a Case of Marital Discord", in Journal of Projective Techniques, Vol. 14, No. 4, December 1950, p. 405-434.

³⁷ Fred Brown, "House-Tree-Person and Human Figure Drawings", in Progress in Clinical Psychology, Vol. 1, Section 1, 1952, p. 180.

research, it also is defensible in practice because of the intrinsic diagnostic value of the wholes. There is even a hint that knowledge of other test data and the clinical history may hinder the interpretation.

That the judges were informed about the sex of each subject was based on the following information gained from the research literature. Many statements are made in the area of projective drawings concerning the interpretation gleaned from the sex of the first drawn Person. These interpretations have their basic roots in Schilder's³⁸ theory of the body image. In accord with this theory, the self-concept is said to be confused in areas of psychosexual identification when a subject draws an opposite-sex Person in response to the request "Draw a Person", since the direction remains ambiguous in regard to the sex of the drawn person requested. The controversy whether or not the drawing of male or female figure by children or adults at various ages has sex linked characteristics is not resolved.

Bieliauskas,³⁹ using a sample of 10,650 children between the ages of five and fifteen, concluded that in

³⁸ Paul Schilder, Image and Appearance of the Human Body: Studies in the Constructive Energies of the Psyche, New York, International Universities Press, 1950, 353 p.

³⁹ Vytautas J. Bieliauskas, "Sexual Identification in Children's Drawings of the Human Figure", in Journal of Clinical Psychology, Vol. 16, No. 1, January 1960, p. 42-44.

general both sexes prefer to draw a person of their own sex. His overall findings seem to provide support for the sexual identification hypothesis as it is applied to human figure drawings. Hammer and Kaplan,⁴⁰ using a sample of 1,276 children in grades four, five and six, concluded from their study that when a child draws a figure of the opposite sex first, no inference concerning sexual identification as a problem can be justifiably made.

As far as studies with adult subjects are concerned, the results are equally contradictory. Machover states that "[...] some degree of sexual inversion was contained in records of all individuals who drew the opposite sex first [...]." ⁴¹ Levy ⁴² agrees with Machover and concludes from his experience that it is usual for people to draw their own sex first, and that it may be usual for a small selected group of homosexuals to draw the opposite sex first. Armstrong and Hauck ⁴³ side with Machover and Levy. From their study, using

⁴⁰ Max Hammer and Arthur M. Kaplan, "The Reliability of Sex of First Figure Drawn by Children", in Journal of Clinical Psychology, Vol. 20, No. 2, April 1964, p. 251-252.

⁴¹ Machover, Personality Projection in the Drawing of the Human Figure, p. 101.

⁴² Sidney Levy, "Projective Figure Drawing", in E.F. Hammer, (Ed.), The Clinical Application of Projective Drawings, Springfield, Ill., Thomas, 1958, p. 91-95.

⁴³ Renate G. Armstrong and Paul A. Hauck, "Sexual Identification and the First Figure Drawn", in Journal of Consulting Psychology, Vol. 25, No. 1, February 1961, p. 51-54.

114 college undergraduates, they concluded that subjects drawing the opposite sex first have greater similarity of self-concept with their conception of the parent of the opposite sex than subjects drawing the same sex first. On the other hand, Hammer,⁴⁴ Mainford,⁴⁵ Granick and Smith⁴⁶-- to name only three studies--have interpreted their results as casting considerable doubt on the projective drawing postulate that the sex of the first figure drawn may serve as an index of the subject's sexual identification or as evidence of psychosexual conflicts or sexual inversion. Buck, in a personal communication to Hammer, is reported to have said: "Certainly it is not so much that the subject draws a man or a woman first, as it is how he draws it [...]."⁴⁷

Since the evidence for the sexual identification hypothesis is rather conflicting and certainly not conclusive in either direction, it was decided to inform the judges

⁴⁴ Emanuel F. Hammer, "Relationship between Diagnosis of Psychosexual Pathology and the Sex of the First Drawn Person", in Journal of Clinical Psychology, Vol. 10, No. 2, April 1954, p. 168-170.

⁴⁵ Florence R. Mainford, "A Note on the Use of Figure Drawings in the Diagnosis of Sexual Inversion", in Journal of Clinical Psychology, Vol. 9, No. 2, April 1953, p. 185-189.

⁴⁶ Samuel Granick and Leon J. Smith, "Sex Sequence in the Draw-A-Person Test and Its Relation to the MMPI Masculinity-Femininity Scale", in Journal of Consulting Psychology, Vol. 17, No. 1, February 1953, p. 71-73.

⁴⁷ Hammer, Op. Cit., footnote 2, p. 170.

about the subjects' sex. There was, however, a second consideration at the basis of that decision. The conflicting experimental evidence leaves room for other possible interpretations why, for instance, female subjects may draw the male figure first. Our western societies are predominantly androcentric. That a large proportion of females may draw the male figure first could reflect recognition that the role of the male has many advantages not afforded their own sex. This attitude in female subjects affects their perception of self. In short, providing the judges with the knowledge of the subjects' sex was intended as giving them complete freedom of interpretation.

The second piece of information the judges had about the subjects was their age. For, research has shown that the age of the subject is a determining factor in the interpretation of the drawings.^{48,49,50}

⁴⁸ Emmanuel F. Hammer, (Ed.), The Clinical Application of Projective Drawings, Springfield, Ill., Thomas, 1958, p. 192.

⁴⁹ Isaac A. Jolles and Harry S. Beck, "A Study of the Validity of Some Hypotheses for the Qualitative Interpretation of the M-T-P for Children of Elementary School Age: IV. Vertical Placement", in Journal of Clinical Psychology, Vol. 9, No. 2, April 1953, p. 164-167.

⁵⁰ George F. Lenner and Eric K. Gunderson, "Height Relationships in the DAP Test", in Journal of Personality, Vol. 21, No. 3, March 1953, p. 392-399.

3. The Semantic Differential.

a) Choice of Instrument.- The experimental design of this experiment called for a technique to measure meaning and at the same time appropriate for measuring meaning of two different kinds of concepts. It had to be a technique that could quantify the meaning of verbal concepts, the actual self and the ideal self, and also the meaning of non-verbal concepts, H-T-P drawings. Also, the technique had to lend itself to a use that would not interfere with a short-inspection, impressionistic judgment of the drawings. Furthermore, the measurements obtained by the technique had to lend themselves to an interpretation in terms of distances on a conscious-unconscious continuum. These requirements are fulfilled by the semantic differential technique as described by Osgood and his associates.⁵¹ It is the indicated technique for an experiment as the one reported here.

The differential is not some kind of test with some definite set of items and a specific score. To the contrary, it is a very general way of getting at a certain type of information. It is a highly generalizable technique of measurement of meaning which must be adapted to the requirements of each research problem to which it is applied.

⁵¹ Osgood, et al., Op. Cit.

Its use is practically unlimited. It can measure the meaning of any concept. The term 'concept' is used in a very general sense to refer to the 'stimulus' to which the subject's reaction is a terminal response. In that way, as the authors say: "What may function as a concept in this broad sense is practically infinite."⁵² In a progress report of research trends involving the semantic differential three years after the publication of Osgood's book, the technique is said to be already a useful instrument. In those three years it had been used extensively in the following areas: cross-cultural meaning, semantic measure of situational anxiety, dream analysis and related testing of psychoanalytic theory, exploration of self-concept in college students, and assessment toward mental professions.⁵³ No similar progress report of recent date seems to be available at this time. However, inspection of the research literature since 1960 reveals that the semantic differential, in spite of its many methodological problems still to be solved, has become very widely used. It is employed extensively in the area of the self-concept and it has been applied repeatedly in research involving projective drawings.

⁵² Ibid., p. 77.

⁵³ Scott C. Hoss, "Current and Projected Status of Semantic Differential Research", in Psychological Record, Vol. 10, No. 1, January 1960, p. 47-54.

In section two of this chapter where the choice of judges was discussed, it was stated that the judges in this study would use the impressionistic, short-inspection type of drawing analysis. This called for a technique which would allow for a fairly rapid use. The semantic differential is such a technique. Osgood⁵⁴ has stated that the attitude to be taken toward a semantic differential task should be one of speed and first impressions. Miron⁵⁵ investigated the influence of instruction upon reliability of the semantic differential. He concludes from his data that standard instructions for the differential should include the admonition to proceed at a fairly rapid pace through the test.

The semantic differential technique measures meaning. It can measure the meaning of concepts like the self-concept and drawing concepts. But do semantic differential data allow an interpretation as the one looked for in this study? An inspection of the essential operations of measurement will settle the issue. The differential is a rating procedure involving a set of seven-point scales terminating in bipolar adjectives, such as weak-strong. Subjects are asked to rate

⁵⁴ Osgood, et al., Op. Cit., p. 82.

⁵⁵ Murray S. Miron, "The Influence of Instruction Modification upon Test-Retest Reliabilities of the Semantic Differential", in Educational and Psychological Measurement, Vol. 21, No. 4, Winter 1961, p. 883-893.

each concept under study on the entire set of scales chosen for the particular project. The rating profile which results is said to indicate the meaning of the concept. The scales are assumed to have a common unit and zero-point. It is also assumed that these scales represent a semantic space which is multi-dimensional but can be defined by a minimum of orthogonal coordinates (factors). The subject's rating operation, therefore, is actually a successive allocation of a concept to a point in this multi-dimensional space by selection from among a set of given scaled semantic alternatives. This point in space (concept) can be defined by its projection on the coordinates. The statistic D is used as a measure of the degree of meaningful similarity between any two concepts rated. The degree of similarity between a pair of concepts is inversely proportional to the distance between them.

In this study the self-concept was operationally defined as the subject's own conscious rating of his self. This self-concept, therefore, became a point in semantic space. The judge rated the subject's self-concept from the H-T-P drawings, thus giving them their meaning-point in the same space. The subject's rating of his self-concept was considered as reference point to which the three judge meaning points were compared. The meaning of these reference points was interpreted in terms of conscious aspects of

personality. That is to say, the conscious-unconscious dimension of personality was defined as semantic distance. Operationally speaking, the smaller the D score between a subject's self-concept rating and one of the judge's drawing ratings, the more peripheral or conscious the aspects of the personality that drawing was considered to reflect. Obviously, the concepts of semantic space and distance lend themselves easily to an interpretation that applies to personality aspects assumed to be reflected in H-T-P drawings.

b) Reliability and Validity.- The reliability of the semantic differential can be defined as the degree to which the same scores can be reproduced when the same concepts are measured repeatedly. The differential yields two types of scores, the basic score and the factor score. Thus, two types of reliability have to be considered. Both are based on test-retest data and are expressed in terms of degree of variation, or average magnitude of this error of measurement.

The basic score is a subject's check-mark with which he indicates his judgment of a particular concept against a particular scale. Test-retest data on this level lead to what is called item reliability. Studies on this reliability show that the average errors of measurement are always less than a single scale unit.⁵⁶ The authors judged this to be satisfactory. They state, however, that the most useful way

⁵⁶ Osgood, et al., Op. Cit., p. 129-131.

of treating test-retest data is in terms of the number of responses which yield absolute deviations of each given magnitude. According to the studies⁵⁷ a change of greater than two units on the average scale by the average subject would be expected to occur less than five per cent of the time by chance or as a result of random errors of measurement.

The other type of reliability is called factor score reliability because it refers to the reproducibility of factor scores under retest conditions. A factor score is formed by unit-weighting those scales which have been included to represent a given factor. In their research the authors have found that a change in factor score of more than 1.00 for the evaluative factor, more than 1.50 for the potency factor, and more than 1.33 for the activity factor is significant at about the five per cent level.⁵⁸ They feel that these levels of reliability should be satisfactory for most applications of the differential.

The research literature since the publication of their book reports no studies directly related to the reliability of the semantic differential. Either its reliability has indeed been found satisfactory or the authors' claim for reliability of their instrument has been taken at face value.

57 Ibid., p. 132-138.

58 Ibid., p. 139.

Two studies seem to vouch for its reliability. Kahneman⁵⁹ found that the constant errors of raters are consistently small, implying agreement on the average in the use of scales. Similar results have been reported by Gross.⁶⁰ He found that only three per cent of the total variance of interpersonal ratings was due to differences among raters in their constant deviations.

The validity of the semantic differential technique is what is usually called a face validity. The technique is proposed as an instrument for measuring meaning. Ideally, therefore, in order to determine its validity semantic differential scores should be correlated with some independent criterion of meaning. But there is no commonly accepted quantitative criterion of meaning. Consequently, for validity the authors had to fall back on the extent to which the distinctions provided by the differential correspond with those which would be made by most observers without the aid of the technique. They state that throughout their work with the technique they have found "no reason to question the validity of the instrument on the basis of its correspondence with

⁵⁹ Daniel Kahneman, "The Semantic Differential and the Structure of Inferences among Attributes", in The American Journal of Psychology, Vol. 76, No. 4, December 1963, p. 557.

⁶⁰ Cecily F. Gross, "Intrajudge Consistency in Ratings of Heterogeneous Persons", in Journal of Abnormal and Social Psychology, Vol. 62, No. 3, May 1961, p. 608.

the results to be expected from common sense.⁶¹ They also mention two experimental studies concerning the evaluative factor where the correlation with external criteria was established. A correlation (r) of .90, significant at the .01 level, was established with the Thurstone attitude scales.⁶² A correlation (ρ) of .73, significant at the .01 level, was found with the Guttman attitude scales.⁶³

Not many validation studies of the semantic differential technique have been carried out or published. Grigg⁶⁴ is one of the few. He compared semantic differential ratings of the self-concept, the ideal self and the concept of neurosis. His normal subjects put their ideal self significantly farther from the neurosis-concept than their self-concept. The author regarded these results as a validation of the semantic differential. Messick⁶⁵ succeeded to verify the validity of two scaling assumptions underlying the semantic as a measuring instrument. When a score is assigned as a concept's scale position, the property of equal intervals

61 Osgood, et al., Op. Cit., p. 141.

62 Ibid., p. 193-194.

63 Ibid., p. 194.

64 Austin E. Grigg, "A Validity Study of the Semantic Differential Technique", in Journal of Clinical Psychology, Vol. 15, No. 2, April 1959, p. 179-181.

65 Samuel J. Messick, "Metric Properties of the Semantic Differential", in Educational and Psychological Measurement, Vol. 17, No. 2, Summer 1957, p. 200-206.

within that scale is assumed. But when a distance F is taken over a set of scales, equal intervals between scales is assumed. Messick's findings showed that correspondent intervals between scales are approximately equal. The second scaling assumption verified by the author was that the scale origin or zero point falls at the centroid of each scale.

Validity, in the sense of generality, has been found for the three major semantic factors. In a review of psycholinguistics from 1958 through June 1965, Ervin-Tripp and Slobin⁶⁶ report that the generality of dimensions found in earlier studies has been repeatedly demonstrated. Evaluation, potency, and activity have appeared in literate groups measured around the world, and in children as young as seven.

c) This Study's Semantic Differential.- As mentioned above the semantic differential technique has to be adapted to the requirements of each research problem to which it is applied. The differential constructed for this research was comprised of fifteen scales representing three factors.

Several factor analytic studies on the differential using entirely different subjects and entirely different methods of collecting the data have yielded highly similar structures. Almost half of the total variance in meaningful

⁶⁶ Susan M. Ervin-Tripp and Dan I. Slobin, "Psycholinguistics", in Annual Review of Psychology, Vol. 17, 1966, p. 435-474.

judgments of the many concepts against widely varied scales could be accounted for in terms of only these three factors, evaluation, potency, and activity. They do not represent, of course, an exhaustive description of the semantic space. The remaining fifty per cent of the variance cannot be simply attributed to error. Some part of it is error variance, the rest representing the presence of some unknown number of additional factors rather specific to particular scales. However, this overall correspondence of the factors found in these studies increases the confidence in something quite consistent in the structuring of human thinking. Hence, the semantic space appears to have mainly three dimensions. The first dimension to appear is the evaluative factor. It is the attitudinal variable in human thinking. The second is the potency factor. It accounts for approximately half as much variance as the first, and is concerned with power and the things associated with it, like size, weight, thoughness, and the like. The third dimension, usually about equal to or a little smaller in magnitude than the second, is the activity factor. It is concerned with quickness, excitement, warmth, agitation, and the like. These three do not exhaust the ways in which meanings may vary. The large portion of total variance remaining unaccounted for indicates that semantic space for concepts-in-general has a large number of dimensions. But Osgood has noted that:

The existence of a large number of dimensions in the total semantic space is not disastrous as far as measurement is concerned; this is because these added dimensions account for relatively little of the total variance.⁶⁷

On account of these considerations the differential of this study represents the evaluative, the potency, and the activity factors.

Ideally one specific scale should represent each of the factors or dimensions of the semantic space. In practice, however, specific scales do not seem to be either perfectly aligned with factors nor perfectly reliable. Therefore, a small sample of closely related scales are used to represent each factor, usually about three⁶⁸ for each factor,⁶⁹ these being maximally loaded on that factor and minimally on others. The scales should be relevant to the concepts being judged, even if this relevancy occurs only via metaphor, like a hot-cold self-concept. According to these criteria the scales for this study were then selected from among the scales used in the factor analytic studies presented by Osgood. This selection yielded five scales for each of the three dominant factors. They are presented in Appendix 1.

67 Osgood, et al., Op. Cit., p. 75.

68 Ibid., p. 78.

69 Ibid., p. 93.

As recommended by Osgood,⁷⁰ controls were established for response set by varying the factor order, and for formation of position preferences by alternating in polarity direction the scales representing the same factor. Another control was added for halo-effect by varying the scale-order on the different rating sheets. Five different scale-orders were set up. Three of them were selected randomly and were then in random fashion assigned to the concepts to be rated. Appendix 2 presents one of these orders and its arrangement.

4. Experimental Procedure.

a) Subjects.- The subjects were approached in group during class-time and were promised personal anonymity. First the H-T-P was administered; five minutes per drawing. Next was handed out to each subject a booklet containing an information sheet, and two pages for rating of their actual and ideal self. When the ratings were finished, the booklets were collected. The subjects kept their H-T-P sets. After one hour of class all subjects rated the concepts once more. This second rating was done to provide retest reliability. The interval of one hour between test and retest was chosen for reasons of convenience. However, research seems to indicate that a three minute or a three week interval does not yield a significant different average error of measurement.⁷¹

70 Ibid., p. 31-32.

71 Ibid., p. 133-135.

b) Judges.- The judges were provided with booklets containing three pages of scales for rating three concepts: the subject as he sees himself, or as he would like to be, as judged from his drawn House, drawn Tree and drawn Person. For clarity's sake, from now on the concepts 'the subject as he sees himself' and 'the subject as he would like to be' will be called respectively the subject's actual and ideal self. The instructions for rating these concepts were printed on the rating pages and read as follows: Judging from this House (or Tree, or Person), how did this subject rate his actual self (or ideal self) on these scales. The instructions were worded that way for two reasons. It was hoped that it would convey better to the judges, and also help them remind, that not the drawing but its drawer had to be rated. Another reason was to clarify to the judges what exactly their task and its purpose was. For, the instructions imply that the subject himself has rated his actual and his ideal self on these same scales, and that these ratings would be compared to the judges' ratings.

Each judge was asked to rate the same ninety-two H-T-P sets twice; once for the subject's actual self and once for his ideal self. In order to avoid that a judge would rate for actual self and ideal self in close contiguity, and in order to provide for all judges an approximately equal time-interval between the two types of ratings, a specific

rating order was adhered to as closely as possible. After the first judge had completed the actual self ratings, the second judge started these same ratings. When the second judge had finished these ratings, the first judge rated for the ideal self. The second judge rated for the ideal self after the first judge had finished them. When also the second judge had finished the ideal self ratings, the third judge rated for actual and ideal self. However, between these two ratings there was an interval of approximately the length of time it had taken the first judge to complete the ideal self ratings. In this way it was hoped that the one type of rating would not influence the other. If it did, the influence would be assumed the same for all three judges.

Out of the ninety-two H-T-P sets, twenty-three were chosen at random fashion and rated a second time for both actual and ideal self by the three judges in order to allow for intra-judge reliability calculations. The same rating order as described in the foregoing paragraph was followed here.

The judges did not rate per H-T-P set. There is the possibility that the judge's rating of the Tree or Person might be influenced by his rating of the previous drawing. The judges were therefore asked not to rate the three drawings of a same subject consecutively. They first rated the House drawings of all ninety-two subjects, then the Tree

drawings and lastly the Person drawings without checking back to the drawing rated previously. It was hoped to avoid that way a possible halo-effect from one drawing to another.

There was no previous agreement among the judges upon what aspects within the drawings would be used for the basis of their ratings, nor was any of the judges told by the investigator which aspects in the drawings should be focussed upon. There was no need for such information. It was pointed out in section two of this chapter that the global, impressionistic, short-inspection type of judgment was probably the more effective. This was the type of analysis the raters have used in this study.

5. Analysis of Data.

The first step was to score all the scales. As the fifteen scales used were equally distributed over three factors, factor scores were calculated. A factor score is formed by averaging the item scores within factors. The five evaluative judgments for a single concept on the five evaluative scales were averaged. The same was done for the potency factor and the activity factor. The results of this operation yielded for each subject six factor scores: one for the evaluative factor, one for the potency factor, and one for the activity factor, obtained from his ratings of his actual self, plus three similar factor scores obtained

from his ratings of his ideal self. The scoring of the judges' scales yielded for each judge eighteen scores per subject. For, the judges rated six concepts each over three factors: the subject's actual self rated from the House, from the Tree, and from the Person, and the same for the subject's ideal self.

The intra-judge reliability and the reliability of the subjects were determined in terms of probability limits for deviations in factor scores. Through the retest procedure each subject or judge contributed a separate deviation factor score for each factor on each concept. The empirical probability of deviations of each size were computed, and are related in the next chapter.

The inter-judge reliability was determined by means of the Kendall coefficient of concordance (W).⁷² It represents a measure of the relation among several rankings of a given number of objects or individuals and expresses the degree of association or overall agreement among them. The W was chosen over a correlation coefficient because its computation is much simpler. The sets of rankings used were those referring to the differences in distance between each one of the H-T-P drawings rated by each judge for each of

⁷² Sidney Siegel, Non Parametric Statistics for the Behavioral Sciences, New York, McGraw-Hill, 1956, p. 229-238.

the ninety-two subjects. Therefore, six W's were computed: one from the ranking of the subjects based on the difference in distance between House and Tree, another on the House-Person distance difference, and a third on the Tree-Person distance difference, for both actual and ideal self. Since the number of subjects used was larger than seven, the obtained W's were, as recommended by Siegel, converted into chi squares. These chi squares were converted into t-ratios since the degrees of freedom exceeded the number of thirty.⁷³ These W's, chi squares, and t-ratios with their level of significance are presented in the next chapter.

The next step was to establish the semantic distance (D) between the different concepts. For this experiment's purpose the following distances per judge had to be established for each subject.

a) The distances from the actual self as rated by the subject (A.S._s) to the actual self as rated by the judge from the subject's drawn House (A.S._{JH}), his drawn Tree (A.S._{JT}), and his drawn Person (A.S._{Jp}).

b) The distances from the ideal self as rated by the subject (I.S._s) to the ideal self as rated by the judge from subject's drawn House (I.S._{JH}), his drawn Tree (I.S._{JT}), and his drawn Person (I.S._{Jp}).

⁷³ Lawrence-F. Dayhaw, Manuel de Statistique, Ottawa, Editions de l'Université d'Ottawa, 1963, p. 377.

A distance, or D , is found by taking the difference between the scores of two concepts on each factor, squaring this difference, summing these squares, and taking the square root of the sum.⁷⁴ The mean of the thus obtained D 's was then calculated.

As stated in the null hypotheses in the previous chapter, the following distances had then to be compared:

- a) $A.S._s - A.S._{JH}$ and $A.S._s - A.S._{JT}$
- b) $I.S._s - I.S._{JH}$ and $I.S._s - I.S._{JT}$
- c) $A.S._s - A.S._{JH}$ and $A.S._s - A.S._{JP}$
- d) $I.S._s - I.S._{JH}$ and $I.S._s - I.S._{JP}$
- e) $A.S._s - A.S._{JT}$ and $A.S._s - A.S._{JP}$
- f) $I.S._s - I.S._{JT}$ and $I.S._s - I.S._{JP}$

Finally, the significance of the differences between these distances was established. For that purpose the Wilcoxon's Matched Pairs Signed Ranks Test⁷⁵ was used. This test was chosen because it is an appropriate test for testing the significance of the differences between pairs of D scores. Osgood⁷⁶ himself has used it for similar designs. Moreover, it accounts for both the direction and the magnitude of

⁷⁴ Osgood, et al., Op. Cit., p. 91.

⁷⁵ Siegel, Op. Cit., p. 79-83.

⁷⁶ Osgood, et al., Op. Cit., p. 101.

differences. Furthermore, since it is a non-parametric test, it is well suited here because the distribution of D is probably not normal in shape. In this experiment the direction of the differences has been predicted in advance. In such a case Siegel⁷⁷ recommends the use of the one-tailed test. However, since the actual results can still depart from the null hypothesis in either direction, Cohen's⁷⁸ plea for the more powerful two-tailed test was followed.

The results of this analysis of the data are presented in the next chapter.

77 Siegel, Op. Cit., p. 77.

78 Jacob Cohen, "Some Statistical Issues in Psychological Research", in B.B. Wolman, (Ed.), The Handbook of Clinical Psychology, New York, McGraw-Hill, 1965, p. 106-111.

CHAPTER IV

PRESENTATION OF RESULTS

This chapter presents the results of this experiment as they were arrived at through the analysis of data described in the previous chapter. The first two sections deal with reliability data. The first section deals with the reliability estimates of the ratings of the subjects. The second section, dealing with the reliability of the judges, has two sub-sections. First are presented the estimates of the intra-judge reliability and, second, the estimates of the inter-judge reliability. The third, and last section of this chapter, relates those results that pertain to the differences between the various semantic distances included in the various hypotheses concerning this study.

1. Reliability of Subjects' Ratings.

The reliability data concerning the subjects' ratings have been presented in the pilot study.¹ They are reported here in summary form.

The probability of obtaining a deviation equal to or greater than a given deviation between test and retest is

¹ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, p. 33-40.

indicated in Table II. The probability limits given are for item scores or basic scores. This reliability was not calculated on all ninety-two subjects, although it will be remembered that all subjects did the ratings a second time. Thirty-one randomly selected subjects were actually included for this reliability test. The data shown in Table II are in agreement with the reliability criteria proposed by Osgood.² The subjects as a group can therefore be said to have been reliable in their ratings.

2. Reliability of Judges' Ratings.

a) Intra-Judge Reliability.- The reliability of the judges' ratings was calculated for the actual self and ideal self ratings per factor and per judge. It is a reliability based on factor scores and, therefore, the criteria for factor score reliability suggested by Osgood³ are being applied here. According to the authors a change in factor score of more than 1.00 for the evaluative factor, more than 1.50 for the potency factor, and more than 1.33 for the activity factor is significant at about the five per cent level. In other words, a change of respectively greater than 1.00, 1.33, and 1.50

2 Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, Urbana, University of Illinois Press, 1957, p. 132 and 130.

3 Ibid., p. 139 and 328.

Table II.-

Probability of Obtaining a Deviation Equal to or Greater than Given Deviation from Test to Retest on the Subjects' Ratings (Item Reliability)(N=31).

Absolute Deviation	% of Responses	Probability
0	56.1	1.00
1	29.0	.43
2	8.9	.14
3	4.2	.05
4	.6	.01
5	.4	.00
6	.0	.00

units on the average scale would be expected to occur less than five per cent of the time by chance or as a result of random errors of measurement. So, for example, if for the evaluative factor a change of 1.20 scale units would occur more than five per cent of the time, that change could not be considered any more as having occurred by chance.

Table III illustrates the reliability of Judge I's ratings. The results shown there are in accord with the accepted reliability criteria. Therefore, Judge I is reliable in her ratings. Judge II also is reliable according to the criteria, although slightly less reliable than Judge I. Table IV shows that Judge II reached deviations as high as two scale units. The reliability data for Judge III are presented in Table V. They show that also Judge III can be considered reliable according to Osgood's criteria.

It was thus found that all three judges were reliable in their ratings of both actual and ideal self. Closer inspection of the tables reveals though that all three had an inclination to be somewhat more reliable in their ratings of the ideal self. A similar inclination is noticeable with scales that measured the potency factor. The scales representing the activity factor yielded the highest deviations. The comparison presented in Table VI gives an idea of the overall reliability agreement among the three judges. It shows that the difference between either one is minimal. It can therefore be concluded that all three judges are not only reliable, but reliable to the same extent as well.

Table III.-

Probability of Obtaining Given Deviations from Test to Retest on Judge I's Ratings of Subjects' Actual and Ideal Self. (Factor Score Reliability)(N=23).

Absolute Deviation	Evaluative Factor				Potency Factor				Activity Factor			
	Actual Self		Ideal Self		Actual Self		Ideal Self		Actual Self		Ideal Self	
	%	P	%	P	%	P	%	P	%	P	%	P
0	12.2	1.000	15.2	1.000	15.2	1.000	24.2	1.000	15.2	1.000	18.2	1.000
.20	21.2	.373	42.5	.843	24.2	.345	33.4	.750	21.2	.610	18.2	.515
.40	24.2	.666	12.1	.483	30.3	.606	33.4	.424	24.2	.606	27.3	.636
.60	21.2	.424	12.1	.320	15.2	.303	6.0	.090	9.1	.364	21.3	.363
.80	6.0	.212	12.1	.181	12.1	.151	3.0	.030	15.2	.273	6.0	.150
1.00	12.2	.152	3.0	.060	3.0	.030					6.0	.090
1.20			3.0	.030					9.1	.121	3.0	.030
1.40	3.0	.030										
1.60									3.0	.030		

PRESENTATION OF RESULTS

Table IV.-

Probability of Obtaining Given Deviations from Test to Retest on Judge II's Ratings of Subjects' Actual and Ideal Self. (Factor Score Reliability) (N=23)

Absolute Deviation	Evaluative Factor		Potency Factor		Activity Factor	
	Actual Self %	Ideal Self P	Actual Self %	Ideal Self P	Actual Self %	Ideal Self P
0	15.2	1.000	13.1	1.000	15.2	1.000
.20	.648	.870	.334	.940	.304	.848
.40	.666	.575	.495	.514	.690	.544
.60	.434	.333	.152	.300	.545	.210
.80	.212	.212	.161	.242	.455	.150
1.00	.060	.091	.030	.060	.150	.090
1.20			.030	.030	.060	.030
1.40	.030					
2.00					.030	.030

Table V.-
 Probability of Obtaining Given Deviations from Test to Retest on Judge III's Ratings of
 Subjects' Actual and Ideal Self. (Factor Score Reliability) (N=23)

Absolute Deviation	Evaluative Factor		Potency Factor		Activity Factor	
	Actual Self %	Ideal Self p	Actual Self %	Ideal Self p	Actual Self %	Ideal Self p
C	9.1	1.000	15.2	1.000	6.0	1.000
.20	30.1	.909	27.3	.848	33.4	.940
.40	24.3	.606	27.3	.575	21.2	.606
.60	18.2	.365	15.2	.302	9.1	.394
.80	9.1	.183	6.0	.150	9.1	.303
1.00	6.1	.092	6.0	.090	9.1	.212
1.20	3.1	.031	3.0	.030	9.1	.121
1.40					3.0	.030

Table VI.-

Average Absolute Deviations and Related Probabilities of Occurrence of Factor Scores Based on Judges' Ratings.

Judge	Concept	Evaluative Factor		Potency Factor		Activity Factor		All Factors	
		Abs. Dev.	p	Abs. Dev.	p	Abs. Dev.	p	Abs. Dev.	p
J.I	A.S.	1.40	.030	1.00	.030	1.60	.030	1.33	.030
	I.S.	1.20	.030	.30	.030	1.20	.030	1.06	.030
J.II	A.S.	1.40	.030	1.20	.030	1.20	.060	1.26	.040
	I.S.	1.00	.091	1.20	.030	1.20	.030	1.13	.050
J.III	A.S.	1.20	.031	1.20	.030	1.40	.030	1.26	.030
	I.S.	1.00	.152	1.00	.030	1.20	.030	1.06	.070

b) Inter-Judge Reliability.- The question formulated for this reliability was whether or not the judges' ratings are related to each other. The results, shown in Table VII, indicate that they are not. None of the derived t-ratios reaches a value equal to or greater than 1.64. This is interpreted to mean that the judges did not apply essentially the same standard or standards in ranking the concepts. This interpretation will be discussed in the next chapter. It can be seen, however, that there was a tendency to overall agreement among the judges in two instances. The first is in their ratings of the subjects' actual self where the concordance between their rankings of the differences between the distances from House to Tree yielded a t-value of 1.25. The second is with respect to the ideal self ratings and the differences between the distances from House to Person; the t-ratio reached a value of 1.34. On the other hand, it can be seen that at other occasions the agreement is very low and almost non-existent, as suggested by the .04 t-value in the H-T difference rankings of the ideal self.

3. Means of Distances and Wilcoxon z Scores.

As mentioned in the previous chapter, the Wilcoxon Matched Pairs Signed Ranks Test establishes significance of differences between distances. The results concerning the significance between the various semantic distances mentioned

Table VII.-

t-Ratios Associated with the Occurrence of Observed Concordance
(w) between the Judges' Rankings of Distance Differences
between H-T-P Drawings Rated for Actual and Ideal
Self. (N=32)

Concept	Set of Rankings	w	χ^2	t ^a
Actual Self	H - T	.273	74.5	1.25
	H - P	.373	101.8	.79
	T - P	.346	94.4	.29
Ideal Self	H - T	.330	90.2	.04
	H - P	.402	109.7	1.34
	T - P	.342	93.3	.18

a Significant for p = .05 when ≥ 1.64 .

in the last pages of chapter three are presented in Table VIII. This Wilcoxon's test, however, does also account for both the direction and the magnitude of differences. On the other hand, a comparison of the means of the various sets of D scores also indicates the magnitude of the differences and the direction of the relation between the different concepts. Therefore, these means were obtained as a check on the results of the Wilcoxon, and they are presented in Table IX so as to clarify the directional relation between House, Tree and Person. The data in these two tables can be described as follows.

a) Actual Self Ratings.- The subjects' actual self as rated by all three judges from the House (A.S._{JH}) comes closer in semantic distance to the actual self as rated by the subjects themselves (A.S._s) than the subjects' actual self as rated by these three judges from the Tree (A.S._{JT}). The subjects' actual self as rated by all three judges from the House (A.S._{JH}) comes closer in semantic distance to the actual self as rated by the subjects themselves (A.S._s) than the subjects' actual self as rated by these three judges from the Person (A.S._{Jp}). Finally, for all three judges, their rating of the subjects' actual self from the Person (A.S._{Jp}) is closer in semantic distance to the actual self as rated by the subjects themselves (A.S._s) than their rating of the subjects' actual self from the Tree (A.S._{JT}). In other words, and in simplified expression, Judges I, II and III show as

Table VIII.-

z Values and Level of Significance (*p*) for Differences between Distances from Each One of the Drawings to the Actual Self and the Ideal Self.

Distance between Concepts	Judges	<i>z</i>	<i>p</i> ^a
A.S. _s - A.S.JH ; A.S. _s - A.S.JT	J.I	-3.12	.0018 ^b
	J.II	-.96	.3370
	J.III	-1.94	.0512 ^b
I.S. _s - I.S.JH ; I.S. _s - I.S.JT	J.I	.61	.5418
	J.II	-1.19	.1170
	J.III	-.60	.2451
A.S. _s - A.S.JH ; A.S. _s - A.S.JP	J.I	-.37	.3844
	J.II	-.39	.4902
	J.III	-.94	.3472
I.S. _s - I.S.JH ; I.S. _s - I.S.JP	J.I	.53	.5962
	J.II	-2.59	.0048 ^b
	J.III	-.04	.4840
A.S. _s - A.S.JT ; A.S. _s - A.S.JP	J.I	-2.07	.0384 ^b
	J.II	-.25	.8026
	J.III	-.06	.9522
I.S. _s - I.S.JT ; I.S. _s - I.S.JP	J.I	-1.35	.1770
	J.II	-3.32	.0005 ^b
	J.III	-.31	.3783

^a Two-tailed test.

^b Significant at $p \leq .05$.

Table IX.-

Means of Distances between the Actual Self and Ideal Self and the House, the Tree and the Person, per Judge. (N=92)

Self Concept	Judge	House	Tree	Person
Actual Self	J.I	1.11	1.32	1.21
	J.II	1.27	1.34	1.32
	J.III	1.36	1.46	1.43
Ideal Self	J.I	1.14	1.13	1.10
	J.II	1.26	1.33	1.17
	J.III	1.63	1.57	1.65

far as the actual self is concerned this distance sequence in terms of closeness: the House is first, then the Person, and then the Tree. These sequences, together with the sequences concerning the ideal self, are presented in diagram form in Figure 1.

For Judge II none of those differences between distances is significant. For Judge I, however, two of the differences are significant: the one between the distances concerning the House and the Tree, and the one between the distances concerning the Person and the Tree. Judge III also shows a significant difference; it is the one between the distances concerning the House and the Tree. When the results of Judge I and Judge III are taken together, there is only one difference between distances which is not significant; it is the one between the distances concerning the House and the Person. With respect to the results of Judge I, statistically speaking, the rating of the Person obviously must be considered to be not different from the rating of the House. Similarly, with respect to the results of Judge III, the Person rating must be considered not different from both the House and the Tree ratings. In the latter case, however, and in terms of absolute figures, the Person rating is more similar to the Tree rating than to the House rating.

It will be remembered that the level of significance was determined by means of a two-tailed test in preference to

Concepts rated by subjects and judges	Judges	H, T, P - from left to right in order of close- ness to concept rated		
A.S. ₃	J.I	H	P	T
	J.II	H	P	T
	J.III	H	P	T
I.S. ₂	J.I	T	H	P
	J.II	P	H	T
	J.III	T	H	P

Figure 1.- Diagram showing the sequence in semantic distance of the House, Tree, and Person, for each judge, in terms of closeness to the rated concepts.

a one-tailed. It may be noted, then, in passing, that none of the above non-significant differences would have proven to be significant at the same level if the one-tailed test had been used instead.

In summary, and at the hand of Figure 1, these results can be described in this manner. The judges were unanimous in rating the actual self of the subjects by means of their drawings in the same order of closeness in meaning to the evaluation the subjects had given of their self-concept: the House was rated closest in meaning, as second closest was rated the Person, and the Tree was rated third. However, only two of the differences between these distances were significant: the distance from House to Tree was significantly different in two instances, and the distance from Person to Tree was significantly different once.

b) Ideal Self Ratings.- The subjects' ideal self as rated by Judge I and Judge III from the Tree (I.S._{JT}) comes closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._s) than the subjects' ideal self as rated by these two judges from the House (I.S._{JH}). The subjects' ideal self as rated by these two judges from the House (I.S._{JH}) comes closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._s) than the subjects' ideal self as rated by these two judges from the Person (I.S._{Jp}). Finally, for these two judges, their rating

of the subjects' ideal self from the Tree (I.S._{JT}) is closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._S) than their rating of the subjects' ideal self from the Person (I.S._{JP}). In other words, Judges I and III show as far as the ideal self is concerned the following sequence in terms of closeness: first the Tree, then the House, and then the Person. These sequences are shown in Figure 1. None of the differences between these distances is significant.

The subjects' ideal self as rated by Judge II from the Person (I.S._{JP}) comes significantly closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._S) than the subjects' ideal self as rated by this judge from the House (I.S._{JH}). The subjects' ideal self as rated by Judge II from the Person (I.S._{JP}) comes significantly closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._S) than the subjects' ideal self as rated by this judge from the Tree (I.S._{JT}). Finally, for Judge II, the rating of the subjects' ideal self from the House (I.S._{JH}) comes closer in semantic distance to the ideal self as rated by the subjects themselves (I.S._S) than the rating of the subjects' ideal self from the Tree (I.S._{JT}). The results of the ratings of Judge II are different from those of Judges I and III in two respects. Firstly, as can be seen in Figure 1, the distance sequence in terms of closeness, namely, Person-House-Tree, is the reverse of the one

obtained by the other two judges. Secondly, in the results of Judge II two of the differences between distances are significant.

In summary, these results can be described as follows. Two judges were unanimous in rating the idea self of the subjects by means of their drawings in the same order and degree of closeness in meaning to the evaluation the subjects made of their self-concept: without any significance between the distances involved, the Tree was rated closest in meaning, the House rated second, and the Person third. The other judge showed the reverse of that sequence and two significant differences as well: the distance from Person to House, and from Person to Tree were significantly different.

An attempt at interpretation of these results is presented in the next chapter.

CHAPTER V

DISCUSSION OF RESULTS

The discussion of results and conclusions is presented in this chapter. The results and subsequent conclusions of the actual and ideal self ratings are discussed separately. First the results of the actual self ratings and then the results of the ideal self ratings. The third section is an evaluation of this experiment and its results in an attempt to present the findings in the light of necessary qualification of interpretation.

1. Actual Self Ratings.

As far as the results of the ratings of Judge II are concerned, none of the obtained differences between distances were significantly different from each other. Therefore, with respect to this judge's ratings, none of the null hypotheses can be rejected. Non-significant results as these can give rise to any number of speculative interpretations none of which can be verified by means of the data resulting from the statistical analysis applied in this experiment. They could mean that, according to this judge, the three drawings of the H-T-P do not reflect significantly different areas of the conscious self-concept. Either, each one of the drawings reflects the same area which might imply that for the subjects

used in this study the drawings did not have different meanings. Or, the overlap of areas in the three drawings is such that this judge considered all three drawings to reflect all areas to an almost equal degree. The latter could mean that any one of the H-T-P drawings should be considered as a reflection of the whole of an individual's conscious dynamics rather than of specifically different levels of his dynamics. These interpretations, however, may not have any significant validity when one considers the possibility that the relevant factor here may rest merely with this particular judge. In its turn, this possibility may lend itself to an even longer list of speculative explanations which may be useful for further research. Still, it is of interest to note that this judge had expressed a lack of confidence concerning the requested task. This doubtfulness probably explains the central tendency noticed in this judge's ratings. This central tendency, then, may be partly responsible for the lack of significant differences. However, more important to this study are the significant results found in the ratings of the two other judges.

Three of the differences between distances turned out to be significantly different from each other in the actual self ratings of Judge I and Judge III. Therefore, as far as these two judges are concerned, the first and the fifth null hypotheses can be rejected. In the light of the

theoretical position taken in chapter two these findings are interpreted to mean that some of the drawings of the H-T-P do reflect significantly different levels of psychic functioning, or that all three drawings of the H-T-P do not reflect the same levels of psychic functioning in the individual. Although not the main goal of the experiment, this finding is basic to it. It demonstrates that it is possible for judges to distinguish from the H-T-P drawings different areas of the conscious self-concept of an individual. This, however, has now to be examined in the light of the experimental hypothesis as formulated in the last section of chapter two. Since these two null hypotheses, one and five, can be rejected solely on the basis of the results of Judge I, these will be discussed first. The results of Judge III will be taken up later.

The experimental hypothesis expects the Drawn House to be significantly closer in semantic distance to the subjects' conscious self concept than both the drawn Person and Tree. As far as the Tree is concerned, the hypothesis is verified. It is not with respect to the Person. The experimental hypothesis further expects the drawn Person to be significantly closer than the drawn Tree. This part of the hypothesis is also verified. In other words, two of the three expectations expressed in the experimental hypothesis have been borne out by the results of Judge I. On the

background of chapter two, these findings are interpreted as follows.

The House and the Person reflect either the same level of personality or a mixture of two levels. These two suppositions lead to further possibilities. In the first supposition that they reflect one and the same level, this level could be either the first, i.e., the social and public level, or the second, i.e., the intimate level. If one assumes that they reflect the first level, it then follows that the Tree can be reflecting either the second level or the third level, i.e. the most private level, or a mixture of both. If, on the other hand, one assumes that they reflect the second level, it then would follow that the Tree reflects the third level only. However, in the second supposition, namely, that House and Person reflect a mixture of levels, that mixture must represent an overlap of first and second level. In the latter case, the Tree reflects the third level. The statistical analysis applied to the data of this experiment does not provide for a differential interpretation. On the other hand, inspection of the just-mentioned suppositions and possibilities reveals a strong probability that the Tree reflects the third level. In case the House and Person reflect a mixture of first and second level, or the second level only, according to the significant differences the Tree cannot but represent the third level. But even in the supposition

that House and Person reflect only the first level, there is still the possibility that the Tree reflects the third level. Nevertheless, with regard to the results of Judge I, the following conclusion must be drawn: the results indicate that the H-T-P drawings do indeed reflect different personality levels but that it is not possible to specify with certainty which drawing reflects which level. This conclusion may strengthen the present knowledge and understanding on which H-T-P interpretation is commonly based. It does not add any new knowledge. It is a foregone conclusion, for it has already been arrived at in previous research.¹ This present conclusion, however, is unavoidable unless another basis for significance than the arbitrary .05 level would seem acceptable. Such another basis will be proposed after the discussion of the results of Judge III which follows next.

The results of the actual self ratings of Judge III allow to reject the first null hypothesis. In this judge's H-P-T sequence only the H-T distance is significantly different in the direction included in the rejected null hypothesis. The interpretation of this situation can take two alternative directions. One is strictly according to the experimental hypothesis, the second more according to the assumption of a

¹ Paul C. Zutterman, Self-Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-86 p.

three-level psychic functioning. The first interpretation is that the House and Tree reflect definitely a different level with no other specifically different level between them. That would mean that Judge III recognized only two levels. In that case, there are several alternatives. The House could reflect the first level and the Tree the second. The House could reflect the first and the Tree the third. The House could reflect a mixture of first and second, and the Tree the third. The House could reflect the second, and the Tree the third. Or, the House could reflect the first and the Tree a mixture of second and third. Again, there is no way to determine by the applied analysis of data which alternative is the correct one. What can be determined though is that the House does not reflect the third level and that the Tree does not reflect the first level. In terms of probability of occurrence it could possibly be said also that the House has as much chance to reflect the first as the second, and that the probability for the Tree to reflect the third is higher than the probability to reflect the second.

Those alternatives can be excluded if one takes the point of view that the results of Judge III do indicate some kind of level between the House and the Tree. In point of fact, the only position the Person can take is somewhere in-between the House and the Tree: not too close to the House so as not to be significantly different from the Tree, and not

too close to the Tree so as not be significantly different from the House. This is so because H-P and P-T distances are not significantly different. This situation eliminates the alternatives, for then each of the three drawings reflects a different personality layer. That House and Tree reflect a different one is indicated by the significant difference. That the Person reflects a personality level different from the one reflected by either House or Tree follows because of its in-between position. If the Person would reflect a level more similar to the one reflected by the House, the distance P-T would have to be significant, and such is not the case. If the Person would reflect a level more like the one reflected by the Tree, the distance H-P would have to be significant, and such is not the case either. So therefore, the Person must reflect a level which is not exactly as the one reflected by the House but not completely different from it either, and similarly for the Tree. It must then be a level that contains elements from both sides without being equal to either side. Seen the position of the drawings on the conscious-unconscious continuum it is felt that the actual self ratings of Judge III can be interpreted as being in accord with the thesis of this study in this way: the House drawing reflects the public personality level, the Tree drawing reflects the most private level, and the Person drawing reflects a mixture of contents of the other two. This mixture-level could be considered as

some kind of dynamic transition stage between the two extreme levels. Its contents may be very similar to the ones assumed in the second or intimate personality level. It should also be taken into account that this non-significant in-between position of the Person may reflect the dynamic overlap mentioned in the third section of chapter two. For purposes of exposition three levels of consciousness were clearly delineated. However, the results of this study are based on the actual functioning of the subjects used. The position of the Person in these results may therefore be hiding or masking the intimate level. This masking could possibly be seen in the non-significance of the H-P and P-T distances.

The fact that some differences between distances were not significant in the ratings of Judges I and III has thwarted easy interpretation. Looking at these data from another point of view may provide a different type of significance. Referring to the previous chapter, it was seen in Table VIII, and more clearly in Figure 1, p. 120, that the results reveal a persistent trend. It is rather remarkable that the ratings of all three judges led to the same sequence on the conscious-unconscious continuum. The position may be taken that this consistency could be considered as significance of some kind in its own right. In the case of Judge I, the hypothesis of no difference between House and Person cannot be rejected. From this, one is not allowed to conclude that

the House and Person drawings reflect the same personality level. Nevertheless, it implies that possibility. If one now assumes for a moment that they actually do reflect the same level, this would entail that one should not expect each of them to take a specific position on the conscious-
unconscious continuum. Within approximately the same area on the continuum, the House may be located ahead of the Person at one time, and second to the Person at another, without changing anything in the interpretation. If these two drawings do really mean the same, one may even assume that such an interchange of position will occur easily and frequently. However, no such interchange took place in the data of this experiment. Three highly qualified judges rated, independently, the House as closer than the Person. Obviously, this fact does still not exclude the possibility that House and Person reflect the same personality level. It may be considered, though, as lowering its probability and increasing the probability that they reflect a different level.

Moreover, it is important to note that the consistent sequence referred to here is the H-P-T sequence, the one predicted on the basis of many theoretical considerations discussed in chapter two. It does not seem unreasonable to suspect an explanation of this consistency based on mere chance. Since for Judge I the H-P difference is not significant, it must be considered as pure chance or as a result of

random errors of measurement that numerically the House comes before the Person on the continuum, thus resulting in a H-P-T sequence. Seen in the context of the ratings of Judge I only, this reasoning is not only correct, it is also quite possible. Suspicion about this chance factor rises though when the ratings of Judge II are being included in the picture. Statistically speaking, the order of the drawings based on the ratings of that judge could take any direction, for none of the differences is significant. Still, the final sequence turned out to be H-P-T, the same one produced 'by chance' by Judge I. This suspicion grows even stronger when one realizes that this chance sequence of Judges I and II is exactly the same as the sequence obtained by Judge III. For, Judge III's sequence is obviously not a product of chance. As explained earlier, once it was established that the H-T difference was the only one significant in Judge III's data, the position of the Person was determined. Consequently, once the direction of that difference was established, the sequence had to be: H-P-T. In short, it seems reasonable to take this sequence consistency into serious consideration, rather than to dismiss it as a chance phenomenon.

Furthermore, it should be emphasized that each judge came to the H-P-T sequence probably by employing different standards of ranking. This refers to the inter-judge reliability. It will be remembered that the Kendall coefficient

of concordance (W) was used as measure of overall agreement among the three judges. Siegel² points out that a high or significant value of W does not mean that the orderings observed are correct. In fact, they may all be incorrect with respect to some external criterion. It is possible that a variety of judges can agree in ordering objects because all employed the wrong criterion. Accordingly, low or non-significant values of W , as the ones obtained in this study, do not mean that the orderings are incorrect. They mean that the judges did not apply essentially the same standards in ranking the concepts. The significance then of these non-significant W 's lies in the fact that the three judges obtained the H-P-T sequence in spite of their use of different ranking standards. If the W 's had been significant, this would have been a factor to consider in the interpretation of the consistency of the sequence. Table VII in chapter four shows that some degree of overall agreement among the judges was reached as far as the House and Tree are concerned. However, for the House and the Person, and the Tree and the Person, the agreement is very low. It is one thing to obtain the same ordering from judges employing the same standard. It is another, to obtain the same ordering from judges employing different ordering standards. If qualified judges were to

² Sidney Siegel, Non Parametric Statistics for the Behavioral Sciences, New York, McGraw-Hill, 1956, p. 230.

use the same ranking standards for ordering a number of concepts on a particular scale, one might expect that they would rank them in the same order. If they were not to employ the same standards, but ranked the concepts in the same order anyway, one would suspect that these concepts had certain characteristics which distinguish them from each other on that scale no matter which way one chooses to look at them. Applied to the results of the actual self ratings, one may suspect that the H-T-P drawings not only reflect different meanings but that each one reflects a particular meaning whichever way one tries to assess it.

To sum up, the results of the actual self ratings can be interpreted as follows. With regard to the actual self of the subjects used in this experiment, two positions can be taken according to which one of two possible viewpoints one chooses to adopt. From a strictly statistical point of view, the results of Judge I must be interpreted as not lending experimental support to the here proposed theoretical approach to H-T-P dynamics. The fact that on the conscious-unconscious continuum the difference between the distance from actual self to House and from actual self to Person is not significant makes it impossible to specify with certainty which personality area is reflected in each drawing. The results of Judge II do not allow an interpretation since none of the differences between distances is significant. The results of Judge III

show that the House reflects the first or public level of personality and the Tree the third or most private.

If, on the other hand, one chooses to analyze the data of the three judges as a whole and in the light of circumstantial evidence, so to speak, he may find considerable overall support for the ideas expressed in chapter two. Firstly, although no definite interpretation could be reached from the results of Judge I, inspection of the various possibilities resulting from the House-Person situation indicates a high probability that the Tree reflects the third or most private level of psychic functioning. Secondly, the non-significant in-between position of the Person in the sequence of Judge III does not permit to say that it reflects the second or intimate level. On the other hand, this same position seems to indicate some level that is not exactly as one or three, but not completely different from both either. Since this study proposes three levels, one is inclined to think that this in-between level represents the second or intimate area albeit with unclear features. Thirdly, in chapter two it was hypothesized that the different meanings of the H-T-P drawings evoke the projection of a different personality layer. On a conscious-unconscious personality dimension this would result in a House-Person-Tree sequence. This same sequence was found in the results of all three judges in spite of the fact that they used different approaches

to their rating tasks. It seems quite reasonable to doubt that this consistency came about by pure chance.

2. Ideal Self Ratings.

There are several characteristics to the judges' ideal self ratings which attract attention. First, the ideal self ratings of Judges I and III did not yield any significant differences, where it was their results which provided the significant differences for the actual self. Second, the ideal self ratings of Judge II show two significant differences and yet, this judge's actual self ratings did not yield any. Third, Judge I and Judge III show the exact same sequence, i.e., Tree-House-Person, a sequence completely different from their House-Person-Tree sequence of the actual self. Fourth, where Judge II showed the same sequence as the two other judges with respect to the actual self, her sequence for the ideal self (P-H-T) is the reverse of the ideal self sequence of Judges I and III (T-H-P). Obviously, the results of the ideal self ratings cannot be interpreted in the same way the results of the actual self ratings were interpreted.

Judge I and Judge III show the same sequence, namely, Tree-House-Person. Following the reasoning used for the actual self-ratings, it could be regarded as a similar kind of consistency. Even so, this time there are only two judges involved. Consequently, in this case, the consistency

argument may not carry as much weight. Also, inspection of the calculation of the W for the ideal self in connection with House and Person revealed that the high value (1.34) is, to a great extent, due to the high agreement between the rankings of Judge I and Judge III. In other words, these two judges have employed similar ranking standards for that ordering. This, most probably, influenced the final total sequence. To what extent, one can only guess. It goes to show though that the sequence consistency in the ideal self ratings cannot be treated as was the consistency of the H-P-T sequence in the actual self ratings. In addition, none of the differences between distances on these two judges' ideal self continuum is significant. Therefore, for these two judges, none of the null hypotheses pertaining to the ideal self can be rejected. This could mean for the subjects of this experiment that their aspirations could not be clearly distinguished according to the personality level they originate from. However that may be, this complete absence of significant differences is conspicuous considering the fact that it was these two judges whose actual self ratings resulted in three significant differences. Equally remarkable is the sequence itself: T-H-P. As far as position is concerned, it is in no way comparable to the H-P-T sequence of the actual self ratings. These two orders are completely different. So far, all this seems to suggest that the

hypotheses formulated for this experiment may not apply to the subjects' self-concept as judged from their ideal self.

Even more conspicuous is the appearance of two significant differences between distances in the ideal self ratings of Judge II who had none in the actual self ratings. And, as if that was not surprising enough, the degree of significance of these differences is the first and third highest of all differences calculated and is outstandingly high. One may be inclined to think that this is, so to speak, almost too significant for a judge who manifested a lack of confidence and a fearful central tendency with regard to the actual self. Unless, of course, one may assume that this same lack of confidence is the responsible factor here as well. Naturally, the results of Judge II can be interpreted at their face value. It is felt, however, that the above considerations make an unconditional interpretation hazardous. Some kind of mental reservation should be observed.

Besides the fact that the sequence of Judge II is the reverse of the sequence of Judges I and III, it also happens to be the sequence one would expect according to Buck's and Hammer's dynamics as explained in the first chapter: P-H-T. Unfortunately, one of the differences between distances is not significant. The distances from ideal self to House and to Tree are significantly greater than the distance from ideal self to Person. However, there is no significant difference

between the distance from ideal self to House and the distance from ideal self to Tree. In Hammer's frame of reference, these findings have to be interpreted in the following if-then fashion. If House and Tree reflect the less conscious level, then the Person reflects either the more conscious, or the in-between level or both. But if House and Tree reflect a mixture of the in-between and the less conscious, then the Person reflects the more conscious. As was the case with the actual self ratings, the statistical analysis does not allow to specify which one of these if-then propositions is the right one. In the case of the actual self ratings another basis for interpretation was found in the data. A similar basis is not provided by the data of the ideal self ratings.

Therefore, from any point of view, the results of the ideal self ratings must be interpreted as not lending experimental support neither to the theoretical approach to H-T-P dynamics proposed in this study, nor to Hammer's.

3. Evaluation of Results.

The discussions in the two previous sections of this chapter lead to the observation of a striking difference between the results regarding the actual self and those regarding the ideal self. There is practically no similarity between the two. The results regarding the actual self can be considered as containing encouraging support for the thesis of

this study. The results regarding the ideal self do not even contain the slightest indication for such support, but they do not verify Hammer's thesis either. This seems to suggest, rather strongly, that the here proposed approach may well apply to the actual self as measured in this experiment but not to the ideal self. The meaning of this suggestion is not directly clear. It is probably quite complex. One possible explanation could be that in the field of H-T-P projection, or even projection in general, the distinction actual self-ideal self constitutes an artificial dichotomy. The ideal self could be considered as an aspect of the actual self, and, possibly an aspect difficult to isolate. The content, as it were, of the ideal self could be looked upon as the aspirations an individual entertains about the dispositions and attitudes he experiences on the different levels of his conscious self. Asking to rate these on semantic differential scales may not prove too difficult a task for him. But, asking judges to determine these aspirations dissociated from their respective actual levels and on the basis of H-T-P drawings may be too difficult or too confusing a request. More specific research in this area may lead to clearer insights in the relation between actual self projection and ideal self projection in H-T-P drawings.

When the alternative interpretations of the significant differences between distances in both actual and ideal

self ratings were discussed, it was pointed out that there was no solution to the if-then stalemate. The obvious reason for this situation is that the experimental design of this experiment and subsequent statistical analysis of its data were geared directly toward recognition of three personality levels. Yet, there was no way of determining where one level ends and the other begins. As a result, when not all three differences were significant no definite statements could be made about any of the three personality levels. One could say that this is an all-or-nothing design, although on the other hand, one significant difference seems to yield better interpretative chances than two. In that sense, the strength of the design is also its weakness. Future research in this particular area will hopefully elaborate a design which would allow more definite conclusions for findings as the present ones. In spite of that alleged weakness of design, the overall results of the actual self ratings of the three judges are believed to contain considerable, though non-statistical, evidence for the thesis tested in this experiment. This belief is based on the phenomenon that the ratings of all three judges resulted in the predicted H-T-P sequence. Two aspects of this consistency were thought significant: the very fact of this consistency, and the judge's ranking standards. These will now be evaluated.

The results of the inter-judge reliability computation showed that none of the six coefficients of concordance (W) were significant. It was interpreted to mean that the judges did not use the same standards in their rankings. This fact was then used as argument for the significance of the sequence consistency in the following way. The implication that each one of the H-T-P drawings reflects one particular area of a personality dimension is stronger when qualified judges ranked them in the same order on that dimension using different standards than using the same standards. At the basis of this reasoning lies the assumption that the use of similar ranking standards tends to result in similar ranking orders. It is not known whether this is a valid assumption where the ranking of the self-concept from H-T-P drawings is concerned. If it is, however, it involves certain implications for the clinical use of the H-T-P. Clarification of this issue is therefore indicated. Future research may try to compare the ratings of high W judges to the ratings of low W judges.

The other aspect to be considered is the very fact of the sequence consistency. It was argued that it could not be explained away by referring to mere chance or errors of measurement on the ground of lack of statistical significance. Still, it should be stressed that this consistency had not been found previously in the research literature known to

to this writer. An attempt to cross-validate the results of this experiment would therefore seem to be indicated. Such an attempt might go hand in hand with projects using different age groups or even abnormal subjects. This would clarify the issues whether the H-T-P drawings have the same meaning for different ages and for normals as well as abnormals.

If the H-P-T sequence has not been found in a consistent way in previous research, it has been noted that the House drawing tends to take the first position on an awareness dimension. The House being the first task in the H-T-P administration, one wonders what influence the order of presentation has on projection. Could the order of presentation alter the drawings' positions on a conscious-unconscious continuum while they maintain their intrinsic meaning for the subject? This question of order of presentation may even be pertinent concerning chromatic and achromatic H-T-P phases. In the second chapter Hammer was cited as saying that the achromatic phase is preparatory to the chromatic, meaning that the achromatic phase prepares the subject for projection on the chromatic. His statement is not questioned here. It is, however, not impossible that deeper material would be produced in the achromatic phase if the chromatic would be administered first. That also seems to be an area for future research. But more closely linked with this experiment would be a research project investigating the hypothesis of this

study as applied to the chromatic H-T-P. Do the chromatic drawings reflect the same personality levels as the achromatic? Does the color factor alter the intrinsic meanings of the different concepts?

Since the results of the ideal self ratings have been considered to give no experimental evidence neither for Hammer's nor for his writer's approach, the actual self results are being focussed upon. From the latter the following conclusions were drawn in the light of the approach proposed in the second chapter. Strictly speaking, the House drawing reflects the public personality level to a greater extent than the Tree drawing. The Tree drawing reflects the most private personality level to a greater extent than the House. It cannot be said that the Person drawing reflects the intimate personality level to a greater extent than either the House and the Tree. However, taking into account certain characteristics of the overall results, it seems reasonable to say that the House reflects the public level, the Person the intimate level, and the Tree the most private level. This could be considered a contribution in the area of personality evaluation by means of the H-T-P test. It is subject, however, to two qualifications. Both have to do with the personality dimension which, according to Hammer, was called the conscious-unconscious continuum.

First, there are the assumptions related to the anonymity of the subjects employed in this experiment. In the fourth section of the second chapter, the assumption was made that the self-concept as rated by the subjects lies in the origin of the conscious-unconscious dimension. That assumption was based on a previous assumption that the subjects described their public and social personality while rating their self concept. The latter assumption in its turn was based on a third assumption, i.e., that personal anonymity in a study like this one elicits in this type of subject--college students--a similar anonymous response which leads to ratings of predominantly the public self. The importance of the anonymity assumption will become clearer through the next comment about the conscious-unconscious continuum. It seems reasonable, but it has not been experimentally verified. A similar project like this one could be set up, using a group of anonymous and a group of non-anonymous subjects. Their results could thus be compared and eventual sequence differences on the continuum interpreted accordingly.

The second qualification to the interpretation of this study's results refers to the meaning given to the semantic distances. In the third section of the third chapter, it was explained how the conscious-unconscious dimension of personality could be defined in terms of semantic distance.

Consequently, the smaller the D score between a subject's self-concept rating and one of the judge's drawing ratings, the more peripheral or conscious the aspects of the personality that drawing was considered to reflect. The converse situation was taken to mean that the drawing in question reflects less peripheral or less conscious personality aspects. It should be stressed that less peripheral or less conscious does not necessarily mean deep or unconscious. In reality these aspects could very well be unconscious, but the operational definitions used in this experiment were not intended to help differentiate between conscious and unconscious. This goes back to the simple observation that it is impossible to say where one personality level ends and another begins. All through this writing Hammer's expression conscious-unconscious continuum has been maintained. It must be pointed out that it is not known how far that continuum stretches in either direction. Therefore, when it comes to interpretation, expressions should be used conditionally. After all, the conclusions to be drawn from an experiment like the one reported here, are based on the degree of discrepancy between what the subjects have said about themselves and what judges have said they think these subjects have said about themselves in their drawings. The danger exists, then, to make a similar mistake as the one the protagonists of psychoanalytic theory

were accused of by Levy.³ He states to have found that the concept of depth is invoked to account for any discrepancy between the patient's accounting for his situation and the therapist's. He says, tongue-in-cheek, that when the views expressed by the therapist are not readily accepted by the patient, the therapist is making a depth interpretation, a judgment about the patient's unconscious. The emphasis in the interpretation of the semantic distances and their differences in this experiment is, therefore, to be laid on the concept of different personality areas of psychic functioning and their content, rather than their conscious or unconscious nature. It may be mentioned in passing, though, that the rating technique used does allow inferences concerning the nature of these contents, but only in the realm of the conscious. For, the self-concept reported by the subjects was obviously a conscious one for they could not rate what they were not conscious of. When drawings then are judged to be not different from that conscious self-concept, they must be considered to reflect something similar, something conscious. However, when drawings are judged to be different, one cannot categorically say that they reflect something unconscious.

³ Leon H. Levy, Psychological Interpretation, New York, Holt, 1963, p. 15-21.

SUMMARY AND CONCLUSIONS

The study reported here is an attempt to verify experimentally a different approach to personality dynamics concerning the H-T-P than the one advocated by Buck and Hammer. Those authors' position is based on two assumptions. The first one is that the H-T-P drawings reflect different levels of consciousness. That assumption has been experimentally verified. The second one is that the Person drawing reflects the more conscious level, the Tree drawing the more unconscious level, and the House drawing a level in-between the two others. The dynamic for that Person-House-Tree sequence is said to be the degree of defensiveness the individual experiences toward each one of the drawings; that defensiveness being, as it were, a direct function of the degree of awareness, or fear, of revealing himself. That second assumption has not been experimentally verified. Moreover, the assumed underlying dynamics have been found rather questionable. Therefore, another approach was proposed and tested. This approach focusses primarily on the meaning each one of the H-T-P drawings has for the individual. That meaning is assumed to be linked to one of three levels of personality that thus becomes projected onto the drawing.

The H-T-P was administered to ninety-two college undergraduates. They also rated their actual self and ideal self on fifteen semantic differential scales representing

the evaluative, the potency, and the activity factors. The subjects' self-concepts were rated on the same scales from each of their drawings by three qualified judges. Comparisons were made between distance scores obtained from subjects' ratings and judges' ratings. The results were as follows.

There was a striking overall disparity between the results obtained from the actual self ratings and those obtained from the ideal self ratings. The two judges whose ratings of the actual self yielded significant differences between distances did not show any significant differences in their ratings of the ideal self. On the other hand, the judge whose ratings of the actual self did not yield any significant differences showed highly significant differences in the ideal self ratings. Another difference between the two sets of ratings was in terms of obtained sequences. None of the sequences obtained from the ideal self ratings resembled the ones obtained from the actual self ratings. Also, the ideal self sequences did not show that persistency of occurrence noticed for the actual self sequence. It was, therefore, obvious that these two sets of results, the actual and ideal, had to be considered as representing two quite different reactions either on the part of the subjects or on the part of the judges, or on the part of both. It was felt, however, that the data themselves did not contain any indication that could lead to an explanation of why these two showed those particular

differences. Obviously and clearly, here is an area that needs further investigation. Future research concerning actual and ideal self as reflected in H-T-P drawings and rated on semantic differential scales should take into consideration both the instruments, and both agents involved, i.e., subjects as well as judges.

An attempt to interpret the results of the ideal self ratings in the light of the experimental hypothesis brought out an unclear and uncertain picture. Two of the three obtained ideal self sequences are the same. They are Tree-House-Person, but none of the differences between the distances was significant. Consequently, none of the null hypotheses pertaining to the ideal self can be rejected as far as two of the three judges are concerned. The fact that both their sequences are the same may not be too significant since it was established that they employed highly similar ranking standards for that ordering. Yet, it may be worthwhile to investigate this incidence in future research. After all, these two judges were deemed highly qualified and quite reliable in their ratings. They obtained the same sequence in their actual self ratings--including three significant differences--a sequence completely different from their ideal self sequence.

The ideal self sequence of the third judge is the reverse of the other two, has two significant differences, and happens to be the sequence that corresponds to Buck's and

Hammer's hypothesis, namely, Person-House-Tree. Interpreted according to that hypothesis, no definite conclusions can be arrived at since the difference between the distance House-Tree is not significant. House and Tree may reflect one and the same level, or a mixture of the two. From these alternatives depends the interpretation of the Person drawing. The statistical analysis of the data leaves that alternative position unresolved.

It must therefore be concluded that the results of the ideal self ratings do not support the thesis of this study. They do not lend definite experimental support to Hammer's hypothesis either. The results of the actual self ratings are summarized next.

The interpretation of the results of the actual self ratings leads to conclusions in two ways: a strict statistical one and a more speculative one. From a statistical point of view, the results of Judge I must be regarded as not giving experimental evidence for the proposed thesis. This is so because one of the differences between distances is not significant, leaving the interpreter in the same situation of alternatives as mentioned earlier for the ideal self. The results of Judge II do not support this thesis either, since none of the differences between distances is significant. The results of Judge III, however, do give some experimental support. Only one difference is significant in

the latter's results. Because it is the one between the drawings taking the extreme positions in the sequence, it eliminates all alternatives and allows the following interpretation: the House drawing reflects the public level of personality to a greater extent than the Tree drawing, and the Tree drawing reflects the most private personality level to a greater extent than the House drawing. As far as the Person drawing is concerned it cannot be concluded that it represents the intimate level to a greater extent than the two other drawings. It represents a level between the first and the third without being completely different from either one. These conclusions, based on the results of the actual self ratings of Judge III, represent the basic findings of this study with respect to the actual self.

The other way of looking at the results of this experiment disregards the statistical level of significance but takes into account several significant features found in the data. Taken together, they are believed to be a strong indication for another kind of significance, so to speak. There is, of course, the just above-mentioned in-between position of the Person drawing in Judge III's actual self sequence. Statistically speaking, one cannot say that it reflects the second or intimate level, for it is not significantly different from either House or Tree. However, it cannot be exactly alike to either one of them. What then can it represent? According to

the position taken in this study, three main levels of psychic functioning can be distinguished going from public over intimate to most private. If now, the public is represented by the drawing on one end of the sequence, and the most private by the one on the other end, it looks as if the drawing in between these two cannot represent anything else but that other level, namely, the one in-between, i.e., the intimate. But, one could say, in the results of this experiment it did not get a very definite expression.

Another significant feature of the results has to do with the position of the House and the Person in the obtained sequences. The differences between the distances involving House and Person are not significant in any of the judges' ratings. In other words, not being different, these two could easily take either the first position or the second, and yet no such interchange of positions occurred. All three judges rated the House closer than the Person. That could, of course, be a pure chance phenomenon though it would be interesting to know what its probability of occurrence is. Future research may lead to a more definite answer.

Still another outstanding feature is that all three judges' actual self ratings yielded the H-P-T sequence. Because some of the differences between distances are not significant, one must conclude that some of those positions could have occurred by mere chance. But what a coincidence,

for this persistent and consistent H-P-T sequence also happens to be the sequence to be expected on the grounds of the theoretical considerations discussed in the second chapter. Moreover, inter-judge reliability data show that the judges arrived at this same sequence using different standards. The latter fact may imply that the reflected self-concepts appear to be different from drawing to drawing no matter how one tries to assess it.

Considering the results of this study according to both viewpoints, the statistical and the non-statistical, the following general conclusions have been drawn. One, the here proposed approach to H-T-P dynamics has not been experimentally supported by the results from the ideal self ratings. The hypothesis is being advanced for future research that the named approach may not apply to that aspect of the self-concept which in this study was called the ideal self. Two, the approach to H-T-P dynamics tested in this experiment has found some experimental support with respect to the actual self. That support is partly statistical, partly speculative. On the basis of that dual evidence within the limits of this experiment, it can be stated that the H-T-P drawings reflect different levels of personality. Moreover, it can be said that one particular level is reflected to a greater extent in one drawing than in another. In other words, strong support was found for a dynamic which hypothesizes that the

meaning of different concepts evokes the projection of different levels of psychic functioning onto the H-T-P drawings. More specifically, the meaning of the concept 'house' evokes the projection of an individual's public personality level onto the House drawing; the meaning of the concept 'person' evokes the projection of his intimate personality level onto the Person drawing, and the meaning of the concept 'tree' evokes the projection of his most private personality level onto the Tree.

If corroborated and substantiated by future research, this interpretation given to the results of the experiment may contribute to the understanding of the projective process in general and the clinical use of the H-T-P test in particular. It should be emphasized, however, that some of the underlying assumptions need further verification, and that it was not intended to determine the conscious or unconscious nature of the contents of the assumed personality levels.

BIBLIOGRAPHY

Adorno, T.W., Else Frenkel-Brunswick, D.J. Levinson and R.N. Sanford, The Authoritarian Personality, New York, Harper, 1950, Parts I and II, 990 p.

These writers' ideas concerning the psychic functioning of the individual provided for this experiment the dynamic conception of three areas of opinions and attitudes within the personality structure. Their theoretical construct of three levels of consciousness was considered appropriate in the context of the problem under study in this experiment for it appears in agreement with the levels hypothesis advocated by Buck and Hammer. This construct applied to the H-T-P led to the specific hypotheses tested in this study.

Buck, J.N., "The H-T-P Technique. A Qualitative and Quantitative Scoring Manual", in Monograph Supplement of Journal of Clinical Psychology, No. 5, October 1943, 120 p.

After ten years of study and clinical usage, and a few previous introductory publications, the author finally published this manual. It represents a basic and indispensable text for the user of the H-T-P. It describes the technique, its administration, scoring and interpretation, from a quantitative and qualitative analysis viewpoint. The qualitative analysis was of special interest to this experiment.

-----, Administration and Interpretation of the H-T-P Test. Proceedings of the H-T-P Workshop, Los Angeles, Western Psychological Services, 1950, 67 p.

This publication is a complete report on the H-T-P Workshop held in Richmond, Virginia, in 1950. It is a useful supplement to the author's manual concerning the administration, scoring and interpretation of the H-T-P. It was of special importance to this study as it contains the dynamics underlying the assumptions put forward in the manual, particularly those concerning the different levels of projection.

Carr, A.C., "Intra-Individual Consistency in Response to Tests of Varying Degrees of Ambiguity", in Journal of Consulting Psychology, Vol. 18, No. 4, August 1954, p. 251-253.

The concept 'level' and its impact on projective techniques is of great clinical significance. In this publication, and in others, Carr has advanced the levels hypothesis to explain the apparent lack of congruity among data derived from different projective techniques. His writings lend considerable support to the application of the levels hypothesis to the H-T-P as implemented in this experiment.

Diamond, S., "The House and Tree in Verbal Fantasy", in Journal of Projective Techniques, Vol. 18, No. 3, September 1954, p. 316-325.

This author's experiments and writings are mainly concerned with the difference in meaning of the H-T-P wholes. The approach presented in the present study is based mainly on the meaning aspect of the H-T-P drawings. Diamond's work, therefore, is of considerable importance, since it contains experimental evidence for the hypothesis that the H-T-P drawings have different and specific meanings to the subject. Moreover, these meanings seem to coincide with the theoretical conceptions advanced in this study.

Dipboye, W.J., "Analysis of Counselor Style by Discussion Units", in Journal of Counseling Psychology, Vol. 1, No. 1, February 1954, p. 21-26.

The author discovered a tendency for counselor style to divide into affective and cognitive areas, and for counselors to respond differently to each area. In this study his finding was related to the use of judges for rating H-T-P drawings. Dipboye's interpretation of the phenomenon led to the choice of judges who could be considered falling in the affective category.

Dussault, Claire, Concepts de Soi et Niveaux de Conscience reflétés par les Dessins du H-T-P, thesis presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1965, vi-98 p.

This is the first research project known that was intended to verify experimentally Buck's and Hammer's hypothesis that the H-T-P drawings reflect different levels of consciousness. Dussault's results did not support that hypothesis. A critical evaluation of that research project and its negative results led to a preliminary study to the present experiment.

Hammer, E.F. (Ed.), The Clinical Application of Projective Drawings, Springfield, Ill., Thomas, 1958, xxi-663 p.

This book brings together in one volume the variety of projective drawing procedures. It contains several contributions concerning the H-T-P Test. In these, Hammer presents his dynamic conception and explanation of the testing behavior of the subject. Of particular interest to this experiment are the author's comments about a conscious-unconscious continuum along which the drawings assume the position P - H - T. It is exactly this P - H - T sequence that was tested by this experiment.

Kamano, D.K., "An Investigation on the Meaning of Human Figure Drawings", in Journal of Clinical Psychology, Vol. 16, No. 4, October 1960, p. 429-430.

This experiment is important since it is one of the first to use the semantic differential technique to test experimentally hypotheses related to the H-T-P. Its critical evaluation by Pickering was a relevant factor in the setting up of the experimental design of this study.

Murstein, B.I., (Ed.), Handbook of Projective Techniques, New York, Basic Books, 1965, xxiv-934 p.

This is a book of readings in the projective test field all published, with one exception, since 1949. It indicates how projective techniques are employed in research, the extent of their utility in various research problems, and their strengths and weaknesses in the assessment of personality. Several of the contributed readings were of importance to this study, particularly those in connection with the projection behavior of the subject.

Osgood, C.E., G.J. Suci and P.H. Tannenbaum, The Measurement of Meaning, Urbana, University of Illinois Press, 1957, 342 p.

This publication is indispensable for the user of the semantic differential technique as measuring instrument. It shows its development, its use, its value, and the research areas where it can profitably be applied.

Pickering, Fern, The Figure Drawing and the Phenomenon of Projection, thesis presented to the School of Psychology and Education, University of Ottawa, Ontario, 1963, ix-83 p.

The author studied the phenomenon of projection in the human figure drawing. She used the semantic differential technique as instrument and employed judges for the ratings. The study is of importance to the extent that suggestions made by its author are at the basis of the design of this experiment.

Rosenzweig, S., "Levels of Behavior in Psychodiagnostics with Special Reference to the Picture Frustration Study", in American Journal of Orthopsychiatry, Vol. 20, No. 1, January 1950, p. 63-72.

The author has found that in the psychodiagnostic situation subjects may respond with predominantly one of three levels of behavior: opinion behavior, overt behavior or implicit behavior. In this experiment, these three behavioral levels were hypothesized to correspond dynamically to the three levels of psychic functioning suggested by Adorno and associates, thus lending support to the latter's assumption.

Siegel, S., Non Parametric Statistics for the Behavioral Sciences, New York, McGraw-Hill, 1956, xxii-312 p.

This book is most useful for the researcher who has to deal with non parametric statistics. The author describes very clearly each method and indicates when and how to use them. One of the methods was used in this experiment to determine the significance of the differences between semantic distances. Another was applied to establish inter-judge reliability.

Wylie, Ruth, The Self Concept, A Critical Survey of Pertinent Research Literature, Lincoln, University of Nebraska Press, 1961, xiii-390 p.

This book is a critical review of the research literature in the area of self psychology carried out between 1949 and 1958. For the researcher concerned with the self concept, this volume is most important. It was even more important to this experiment since the major emphasis of the book is given to studies which pertain to the phenomenal or conscious self concept.

Zutterman, P.C., Self Concept and Levels of Consciousness as Judged on the H-T-P, interim report presented to the Faculty of Psychology and Education, University of Ottawa, Ontario, 1966, ix-86 p.

This study investigated the different levels in the conscious self as judged on the H-T-P. Its results and various secondary findings gave rise to questions and hypotheses treated in the present experiment.

APPENDIX 1

SEMANTIC DIFFERENTIAL

Scales per factor

APPENDIX 1

Scales Selected for Each Factor (Semantic Differential).

Factors	Scales	
Evaluative	Good	- Bad
	Ugly	- Beautiful
	Pleasant	- Unpleasant
	Awful	- Nice
	Kind	- Cruel
Potency	Loud	- Soft
	Weak	- Strong
	Heavy	- Light
	Soft	- Hard
	Masculine	- Feminine
Activity	Sharp	- Dull
	Passive	- Active
	Ferocious	- Peaceful
	Cold	- Hot
	Fast	- Slow

APPENDIX 2

SEMANTIC DIFFERENTIAL

Sample showing one scale-order with the rotation of
the scales and their alternation in polarity
direction

APPENDIX 2

Sample of Semantic Differential Rating Scales

JUDGING FROM THIS TREE, HOW DID B RATE HIS I.S. ON THESE SCALES?

PLEASANT _____ : _____ : _____ : _____ : _____ : _____ : _____ UNPLEASANT
HEAVY _____ : _____ : _____ : _____ : _____ : _____ : _____ LIGHT
FEROCIOUS _____ : _____ : _____ : _____ : _____ : _____ : _____ PEACEFUL
AWFUL _____ : _____ : _____ : _____ : _____ : _____ : _____ NICE
SOFT _____ : _____ : _____ : _____ : _____ : _____ : _____ HARD
COLD _____ : _____ : _____ : _____ : _____ : _____ : _____ HOT
KIND _____ : _____ : _____ : _____ : _____ : _____ : _____ CRUEL
MASCULINE _____ : _____ : _____ : _____ : _____ : _____ : _____ FEMININE
FAST _____ : _____ : _____ : _____ : _____ : _____ : _____ SLOW
GOOD _____ : _____ : _____ : _____ : _____ : _____ : _____ BAD
LOUD _____ : _____ : _____ : _____ : _____ : _____ : _____ SOFT
SHARP _____ : _____ : _____ : _____ : _____ : _____ : _____ DULL
UGLY _____ : _____ : _____ : _____ : _____ : _____ : _____ BEAUTIFUL
WEAK _____ : _____ : _____ : _____ : _____ : _____ : _____ STRONG
PASSIVE _____ : _____ : _____ : _____ : _____ : _____ : _____ ACTIVE

APPENDIX 3

ABSTRACT OF

H-T-P Drawings, Their Meaning and the
Levels Hypothesis

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ABSTRACT OF

H-T-P Drawings, Their Meaning and the Levels Hypothesis¹

This experiment was carried out in an attempt to clarify the dynamics underlying the projection process in the H-T-P test. The following dynamics were proposed, and tested experimentally. The concepts represented by the H-T-P drawings have different meanings, each one referring to a particular level of psychic functioning in the individual. The graphical execution of the concepts evokes the projection of these levels onto the drawings. The House drawing thus reflects the social and public personality level, the Person drawing reflects the intimate level, and the Tree drawing reflects the most private level. The following experimental procedures were devised and implemented.

The subjects were ninety-two college undergraduates between sixteen and fifty-four years of age. They were administered the H-T-P, and rated their self-concepts, actual and ideal, on fifteen semantic differential scales. The subjects' self-concepts were rated on the same scales from each of their drawings by three qualified judges. Comparisons were

¹ Paul C. Zutterman, doctoral thesis presented to the Faculty of Psychology and Education of the University of Ottawa, Ontario, March 1967, ix-165 p.

made between D scores obtained from subjects' ratings of their self-concepts and ratings of subjects' self-concepts by each judge. The results obtained were interpreted in the following manner.

The results obtained from the ideal self ratings were interpreted as not lending experimental support to the thesis of this study. Moreover, a striking disparity between the results obtained from the ideal self ratings and those obtained from the actual self ratings was interpreted that the thesis of this study may not apply to the ideal self.

The results obtained from the actual self ratings were interpreted on the basis of two kinds of evidence. From the statistical point of view, the results obtained from all three judges do not allow for any definite conclusion. Two of the three differences between distances are significant in the results of one judge, and one of the three is significant in the results of another. These findings were interpreted to mean that the H-T-P drawings do reflect different personality layers. It could be determined more specifically that House and Tree, and Person and Tree, do reflect significantly different layers. However, since in both cases not all three differences are significant, it is not possible to determine with certainty which of the three personality levels is reflected in each drawing. No null hypotheses could be

rejected on the basis of the results of the third judge since they did not yield any significant differences between distances.

On the other hand, the results of the actual self ratings of the three judges taken together show certain striking characteristics which are believed to allay considerably the uncertainty of the outcome of the statistical analysis. The foremost striking feature is that all three judges' actual self ratings yielded the drawing sequence that was predicted on the basis of the dynamic approach proposed in this study. On an assumed personality dimension, conscious-unconscious, all three judges ranked the drawings in terms of closeness to the actual self of the subjects in the order House-Person-Tree. It was argued that this sequence consistency could hardly be considered a chance phenomenon or a result of random errors of measurement. It is believed to be a strong indication for non-statistical evidence supporting the approach to H-T-P dynamics proposed and tested in this study.