


Spring 5-30-1951

# A Study of Reaction to Frustration in Stutterers

LeRoi Madison

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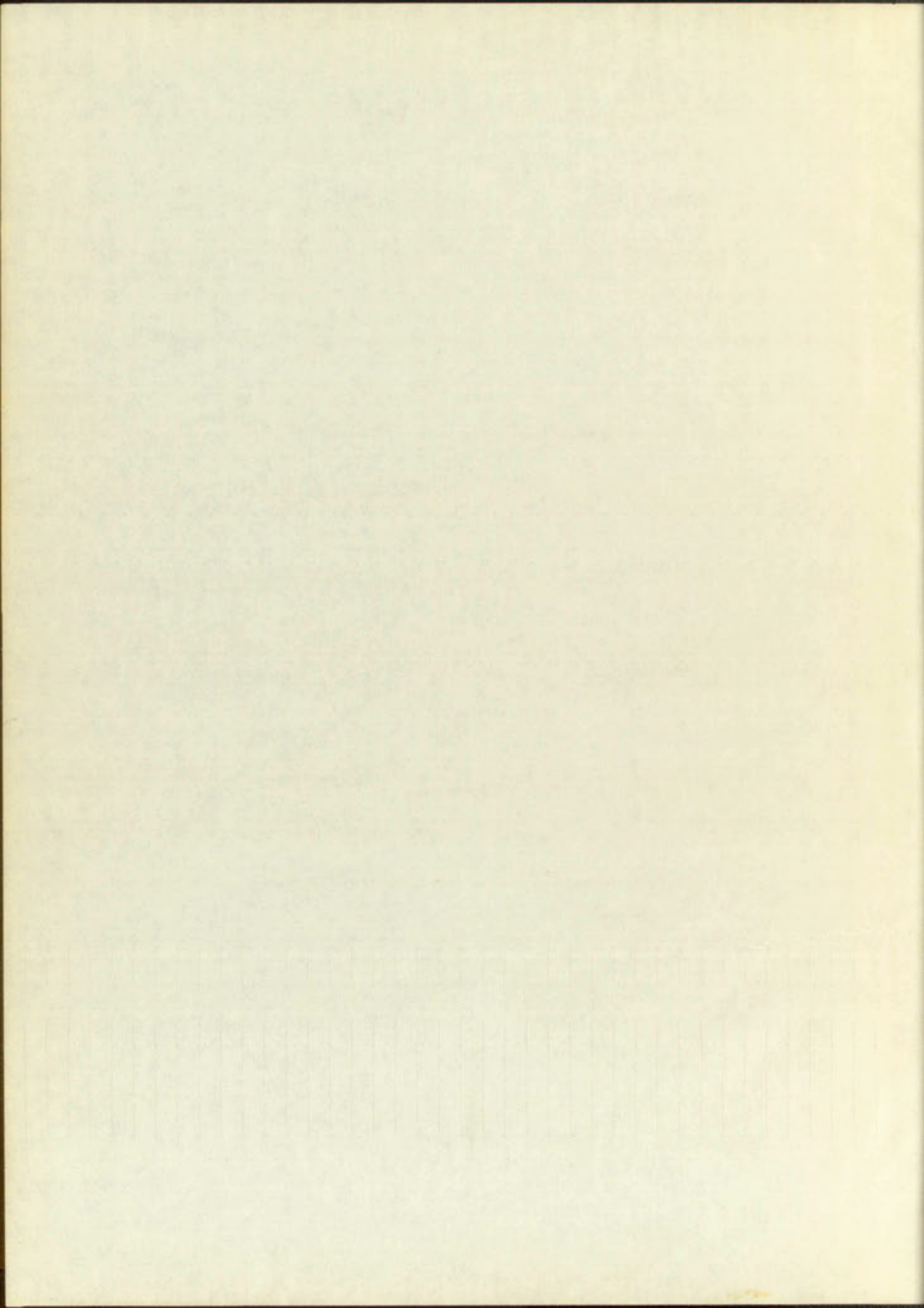
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A STUDY OF REACTION TO FRUSTRATION IN STUTTERS

By

LeRoi Madison



A Thesis

In partial fulfillment of the  
Requirements for the Degree of  
Master of Arts in Speech

The University of New Mexico  
1951

A STUDY OF BRACHIOPLATE TO BRACHIOPLATE



by  
James H. ...

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This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Committee of the University of New Mexico in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

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DATE

Thesis committee

Fred M. Christ  
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MASTERS OF ARTS

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Thesis committee

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CHAPTER

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W.D.  
E.F.W.S.  
F.L.I.C.I.

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I. The University of Chicago

UNIVERSITY OF CHICAGO

## CHAPTER I

### THE PROBLEM, DEFINITIONS OF TERMS USED, AND REVIEW OF THE LITERATURE

Inherent in man's physical structure, mental endowments, and social environment are an infinite number of frustration sources. One of the few principles on which most authorities in the field of psychology generally agree is that any situation which the individual considers frustrating will produce behavior changes. These changes are often psychological maladjustments. Some authorities in the field of speech correction maintain that stuttering is entirely a psychological maladjustment. At the other extreme is a group which insists that stuttering is primarily a manifestation of some physiological or neurological dysfunction. Even this latter group admits that there are some psychological factors present in the development of stuttering. If these two hypotheses (1) that frustration is one of primary sources of psychological maladjustment and (2) that stuttering is, in part or whole, a manifestation of some psychological maladjustment, are accepted, then a study of the role which frustration may play in the etiology and development of stuttering is clearly indicated.

CHAPTER I

THE PROBLEM, DEFINITION OF TERMS AND STATEMENT OF PURPOSE

THE STATEMENT

Inherent in man's physical, mental, and moral nature.

and social environment are the primary factors in

the development of the individual. One of the purposes of this

study is to determine the extent to which the individual is

influenced by his environment. The individual is not a

tabula rasa. He is born with certain characteristics

which are modified by his environment. The individual is

not a passive recipient of his environment. He is an

active participant in his own development. He is a

being who is constantly growing and changing. He is a

being who is constantly learning and developing. He is a

being who is constantly becoming. He is a being who is

constantly in the process of becoming. He is a being who

is constantly in the process of becoming. He is a being who

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## I. THE PROBLEM

Statement of the problem. It was the purpose of this study to compare the responses of a group of stutterers on the Rosenzweig Picture-Frustration Study with the norms established for that study to determine whether, as a group, they show any significant differences in (1) the direction of aggression, and (2) the type of reaction to frustration.

Importance of the study. During the past decade, increasing emphasis has been placed on frustration as a cause of psychological maladjustment. Leaders in the speech correction field have also shown a tendency toward agreement that stuttering is primarily a psychological problem. But, to the writer's knowledge, no study has been undertaken, using a test such as the Rosenzweig, to measure the differences or similarities between stutterers and normal speakers in their reactions to frustration.

## II. DEFINITIONS OF TERMS USED

Stuttering. Throughout this study "stuttering" will be interpreted as meaning speech in which the normal rhythmic pattern is interrupted by hesitations, repetitions, and/or blocks, with or without observable clonic or tonic spasms, but of such frequency as to attract the attention of the auditor and to be a source of anxiety to the speaker.

Blasphemy of the King - I was the only one  
 study to compare the two cases of a king of the kingdom of  
 the Roman Empire. The first case was that of King  
 established for that purpose and the second case was that of  
 they show any similarity in the cases of the two kings  
 of aggression, and (2) the fact of aggression in the history.

Implications of the King - In the first case  
 increasing aggression and the fact of aggression in the  
 case of King of the Roman Empire. In the second case  
 aggression in the first case and the second case of the  
 that aggression in the first case and the second case of the  
 to the king's aggression in the first case and the second case  
 using a form of aggression in the first case and the second case  
 cases or aggression in the first case and the second case  
 in their respective cases.

**ERASE**  
**ERASE**

Blasphemy of the King - I was the only one  
 be interpreted as a blasphemy of the king of the Roman Empire  
 suffered in the first case and the second case of the  
 those, with an emphasis on the fact of aggression in the first case  
 but of such aggression in the first case and the second case  
 action and to be a blasphemy of the king of the Roman Empire.

Frustration. Frustration will be interpreted as meaning that condition which exists when on-going behavior suffers interference or thwarting.

Direction of aggression. Because the Picture-Frustration Study was used in this investigation as a measure of frustration, the six following definitions are from Rosenzweig's publication.<sup>1</sup> Rosenzweig postulates that frustration instigates aggression and has termed the directions which that aggression may take as extrapunitiveness, intropunitiveness, and impunitiveness.

Extrapunitiveness. Extrapunitiveness will be interpreted as meaning a direction of aggression in which aggression is turned onto the environment.

Intropunitiveness. Intropunitiveness will be interpreted as meaning a direction of aggression in which aggression is turned by the subject upon himself.

Impunitiveness. Impunitiveness will be interpreted as meaning a direction of aggression in which aggression is evaded in an attempt to gloss over the frustration.

---

<sup>1</sup> S. Rosenzweig, E. E. Fleming and H. J. Clark, "Revised Scoring Manual for the Rosenzweig Picture-Frustration Study." Journal of Psychology, 1947, 24:165-208.





Types of reaction. Rosenzweig has postulated that the reaction to frustration is a response in the direction of the satisfaction of the dominant need of the individual. He has categorized these reactions as obstacle-dominance, ego-defense, and need-persistence.

Obstacle-dominance. An obstacle-dominance reaction will be interpreted as meaning a reaction in which the barrier occasioning the frustration stands out in the responses.

Ego-defense. An ego-defense reaction will be interpreted as meaning a reaction in which the ego of the subject predominates.

Need-persistence. A need-persistence reaction will be interpreted as meaning a reaction in which the solution of the frustrating problem is emphasized.

### III. REVIEW OF THE LITERATURE

Although much has been written, both on the etiology of stuttering and the problem of frustration, only a brief summary of theories and experiments necessary to the understanding and development of the present problem will be presented in this discussion.

Effect of reaction

The reaction is first order in the reactant and zero order in the catalyst. The rate of reaction is independent of the concentration of the catalyst. The reaction is exothermic and reversible.

Reaction mechanism

The reaction proceeds via a two-step mechanism. In the first step, the reactant reacts with the catalyst to form an intermediate. In the second step, the intermediate reacts to form the product and regenerate the catalyst.

Rate equation

The rate equation for the reaction is  $r = k[A]$ , where  $r$  is the rate of reaction,  $k$  is the rate constant, and  $A$  is the concentration of the reactant.

Equilibrium constant

The equilibrium constant  $K_c$  for the reaction is given by  $K_c = \frac{[C][D]}{[A][B]}$ , where  $[A]$ ,  $[B]$ ,  $[C]$ , and  $[D]$  are the concentrations of the reactants and products at equilibrium.

Effect of temperature

The rate of reaction increases with an increase in temperature. This is because the molecules have more kinetic energy and are more likely to overcome the activation energy barrier. The equilibrium constant also increases with temperature for an exothermic reaction.

EFFICIENCY  
ZERASE BOND

PAGE CONTENT

Literature on the approach to the problem of stuttering. The classification of the theories of the etiology of stuttering must of necessity be an arbitrary one, because few authorities in the field state that stuttering is unicausal. Even those who insist that there is one primary cause show in their discussion of therapy a recognition of other factors in the development of the disorder. One of the early attempts at classification was made by Fletcher<sup>2</sup> who advanced five possible classifications: organic, physiological, psychological, sociological, and environmental. Van Riper<sup>3</sup> gives six major categories: educational, psychoanalytical, neurological, neurotic, imagery, and inhibitory theories. Hahn<sup>4</sup> has published a compendium of twenty-five summaries written (or approved) by American and European authorities. He has made no attempt to classify the theories. Ainsworth<sup>5</sup> uses only

---

<sup>2</sup> J. M. Fletcher, The Problem of Stuttering: A Diagnosis and a Plan of Treatment. New York: Longmans, Green, 1928. pp. 89-315.

<sup>3</sup> Charles Van Riper, Speech Correction: Principles and Methods. (2nd edition) New York: Prentice-Hall, 1947. pp. 267-68.

<sup>4</sup> E. F. Hahn, Stuttering: Significant Theories and Therapies. Stanford: Stanford University Press, 1943.

<sup>5</sup> S. Ainsworth, "Integrating Theories of Stuttering," Journal of Speech Disorders, 1945. 10:205-210.

Abstract. The chemical nature of the polymer of polyethylene glycol (PEG) is discussed in relation to its physical and chemical properties. The polymer is shown to be a linear, non-branching, crystalline material with a melting point of approximately 60°C. The polymer is soluble in a wide range of organic solvents and is compatible with many plastics. The polymer is used in a wide variety of applications, including as a plasticizer, a binder, and a component of many pharmaceuticals. The polymer is also used in the synthesis of many other polymers.

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Journal of Research in Chemistry, 1964, 1, 1-10.  
G. S. Whitby, J. R. H. Ross, and J. R. H. Ross.  
The synthesis and properties of polyethylene glycol.  
The polymer is shown to be a linear, non-branching, crystalline material with a melting point of approximately 60°C. The polymer is soluble in a wide range of organic solvents and is compatible with many plastics. The polymer is used in a wide variety of applications, including as a plasticizer, a binder, and a component of many pharmaceuticals. The polymer is also used in the synthesis of many other polymers.

three broad classifications: dysphemic, developmental, and neurotic.

The following discussion will be limited to those theories in which the psychological factors are considered to be the sole cause, or one of the primary causes of stuttering.

It is evident from personal accounts such as Johnson's<sup>6</sup> and Purchit's<sup>7</sup> that stuttering is a source of great mental distress to the chronic stutterer. He is constantly aware of his hearers' embarrassment and discomfort. Abbott<sup>8</sup> suggests that unconscious guilt feelings, resulting from repressed hostility toward the listener, may explain the unconscious reluctance of some stutterers to discard their secondary mechanisms during the treatment. These mechanisms may fulfill the need of the stutterer for self-punishment as an atonement for his hostility.

Steer and Johnson<sup>9</sup> found stuttering more severe when

---

<sup>6</sup> Wendell Johnson, Because I Stutter. New York: Appleton-Century, 1930.

<sup>7</sup> Satya N. Purchit, "Why Stammerers Suffer," Journal of Speech Disorders, 1947. 12:419-420.

<sup>8</sup> James A. Abbott, "Repressed Hostility as a Factor in Adult Stuttering," Journal of Speech Disorders, 1947. 12:428-430.

<sup>9</sup> M. O. Steer and W. Johnson, "An Objective Study of the Relationship Between Psychological Factors and the Severity of Stuttering," Journal of Abnormal and Social Psychology, 1936. 32:36-46.



the audience is large and contains many persons with whom the stutterer is unacquainted. They also suggest that the severity of stuttering may be significantly related to such subjective factors as general emotionality, desire to keep from stuttering, embarrassment, awareness of real or imagined embarrassment on the part of the audience, and effort and muscular strain.

Travis<sup>10</sup> contends that stutterers, as a group, are not mentally inferior to normal speakers. Quoting a study of 73 stutterers in the Madison, Wisconsin, public schools, he shows that the distribution of their mental ratings approaches the normal curve. Travis adds that "the stutterers in the University of Iowa have been distinctly superior to the average student in intelligence."

The belief in the stutterer's mental inferiority may be explained by MacKaye's observation that,

Both the method of intelligence testing and classroom experiences indicate that "intelligence" as the word is used in education refers to abilities identical to or highly correlated with speech functions.<sup>11</sup>

Using interviews, case histories, autobiographies,

---

<sup>10</sup> L. E. Travis, Speech Pathology: A Dynamic Neurological Treatment of Normal Speech and Speech Deviations. New York: D. Appleton and Company, 1931. pp. 98-101.

<sup>11</sup> D. L. MacKaye, "Interrelations of Speech and Intelligence," American Journal of Sociology, 1929. 35:353-368.





and questionnaires, Johnson<sup>12</sup> made a comparative study of stutterers, normal speakers, and psychoneurotics. He says that the results indicate that the personality problems of stutterers more than normal speakers and psychoneurotics are featured by shyness, anxiety, depression, and nervous instability. Their problems are not more numerous but somewhat more extreme than those of normal speakers. A later study by Johnson,<sup>13</sup> employing the Woodworth-House Mental Hygiene test, does not show stutterers to be seriously maladjusted.

Duncan<sup>14</sup> compared 62 stutterers with an equal number of non-stutterers on the Bell Adjustment Inventory. Results of the chi square analysis of the 35 questions relative to home adjustment showed a reasonable difference. The stutterers indicated that they believed their parents did not understand them, lacked real affection, underestimated their maturity, and had a feeling of disappointment in them.

---

<sup>12</sup> W. Johnson, "The Influence of Stuttering on the Personality," University of Iowa Study: Study of Child Welfare, Vol. 5, No. 5. Iowa City: University of Iowa, 1932.

<sup>13</sup> \_\_\_\_\_, "The Influence of Stuttering on the Attitudes and Adaptations of the Stutterer," Journal of Psychology, 1934. 5:415-420.

<sup>14</sup> Melba Hurd Duncan, "Home Adjustment of Stutterers Versus Non-Stutterers," Journal of Speech and Hearing Disorders, 1949. 14:255-259.



Many of them confessed a desire to run away from home. In a study made by Ingebregtsen,<sup>15</sup> forty stutterers were given a medical examination, a test of memory (Rossolimo-Bartsch), a word test, a test of vocal music, an intelligence test, and a Rorschach test. The results were interpreted as indicating that the characteristics of the developed stutterer are reduced attention, great suggestibility, small store of words, logical displacement, motor amusia, stereotype perception with tendency to perseveration, indolence, derangement of motility, and signs of depressions, repressions, and restrictions.

Fletcher was one of the early American exponents of the theory that stuttering was a psychological difficulty. He defines it as a "morbidity of social consciousness, a hypersensitivity of social attitude, a pathological social response."<sup>16</sup> Tartar takes a similar approach to the problem declaring that stuttering is a symptom of an emotional disturbance resulting from the failure on the part of the individual to adapt himself to a social situation.<sup>17</sup> Solomon

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<sup>15</sup> E. Ingebregtsen, "Some Experimental Contributions to the Psychology and Psychopathology of Stutterers," American Journal of Orthopsychiatry, 1936. 6:630-649.

<sup>16</sup> J. M. Fletcher, The Problem of Stuttering: A Diagnosis and a Plan of Treatment. New York: Longmans, Green, 1928. p. 226, Cf. p. 93.

<sup>17</sup> G. Tartar, "Report of a Case of Stuttering as a Problem of Vocational Readjustment," Journal of Abnormal and Social Psychology, 1928. 23:52-58.



believes that stuttering is a "specifically conditioned personality, emotive behavior and speech disorder in the struggle for equilibrium during social speaking."<sup>18</sup> He says that, as stuttering develops, personality changes occur in one of three directions: (1) suppression of personality; (2) over-assertion; or (3) sensible acceptance of the situation and reasonable attempts to bring about gradual improvement.<sup>19</sup> Krausz<sup>20</sup> states that stuttering is a form of negative compulsion. It is focused on the social situation because the stutterer confuses speaking with talking.

Brown, who considers that stuttering has a neuro-physiological basis, declares:

Inasmuch as the external, or objective features of the situation are not of themselves capable of producing such an emotional reaction, I conclude that it is produced by internal, or subjective features, which I have designated "emotional conflict," signifying a conflict between the stimulus to speak and a stimulus not to speak.<sup>21</sup>

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<sup>18</sup> M. Solomon, "Stuttering as an Emotional and Personality Disorder," Journal of Speech Disorders, 1939. 4:347-357.

<sup>19</sup> ———, "The Psychology of Stuttering," Journal of Speech Disorders, 1938. 3:59-62.

<sup>20</sup> E. O. Krausz, "Is Stuttering Primarily a Speech Disorder?" Journal of Speech Disorders, 1940. 5:227-231.

<sup>21</sup> F. W. Brown, "Stuttering: Its Neuro-physiological Basis and Probable Causation," American Journal of Orthopsychiatry, 1932. 2:363-371

believes that attention is a "selective" process...  
essentially, selective attention is a "selective" process...  
strategies for enhancing language skills...  
that, as a result of...  
one of these... (1)...  
(2) over-attention...  
education and...  
improvement...  
negative...  
because the...  
group, who...

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physiological...  
increases...  
the...  
is produced...  
which...  
analyzing...  
agent...

12. A. J. Ellis, "Theory of language acquisition and the...  
Journal of Experimental Psychology, 1953, 46, 1-15.  
13. The Psychology of Language, 1956, 1, 1-15.  
14. E. J. Lenneberg, "The biological basis of language...  
Journal of Experimental Psychology, 1967, 74, 1-15.  
15. W. J. Levelt, "The structure of language production...  
Journal of Experimental Psychology, 1989, 118, 1-15.

In an early publication, Froschels<sup>22</sup> refers to stuttering as "Associative aphasia" and suggests that it is one of the psycho-neuroses, but that its characteristic spasms "arise within the volitional paths of the central nervous system." He shifted his viewpoint in a later work stating:

In presenting my own concept of stuttering as a neurosis, I draw in part on observations of other authors, too numerous to mention. I believe that children passing through a period of word or syllable-repetition may or may not fix this sign, and that a subconscious desire for abnormal behavior is the decisive factor.

.....

Stuttering alters the balance of the family situation in favor of the stutterer and, therefore, becomes a means for achieving satisfaction.<sup>23</sup>

Green<sup>24</sup> places the individual who develops stuttering in what he terms the "stutter-type group" which is characterized by "a basic tendency toward excitability and disorganization, an exaggerated capacity for response to stimuli, and a relatively high potentiality for the spread of emotional tension." Because the potential stutterer is

---

<sup>22</sup> Emil Froschels, Speech Therapy. Boston: Expression Company, 1933. pp. 200-203.

<sup>23</sup> \_\_\_\_\_, (Ed.) Twentieth Century Speech and Voice Correction. New York: Philosophical Library 1948. pp. 203-204.

<sup>24</sup> James S. Greene, in E. F. Hahn, Stuttering: Significant Theories and Therapies. Stanford: Stanford University Press, 1943. pp. 45-47.

In an early publication, the author  
presenting as "The Psychology of the  
one of the psycho-physiological  
system" and within the limits of the  
nervous system, the author has  
shown:

In presenting of the author's  
method, I first present a general  
method, the purpose of which is to  
obtain general results, and then  
describe in detail the method  
employed in the present study.

Efficiency  
Case Bond  
Content  
The author's method is characterized  
by a series of tests, the results of  
which are presented in a series of  
diagrams, and a series of tables  
of statistical results.

University of California  
Department of Psychology  
Berkeley, California  
1925



vaguely aware of his inherent instability, he develops a keen sense of inadequacy. Since the stuttering symptom enables him to rationalize his lack of accomplishment, it has an adjustive value for him.

Wilton, a former member of Dr. Greene's staff at the National Hospital for Speech Disorders, says that stuttering is not caused by organ anomalies or dysfunction, but that it is due to "lack of nervous balance and to maladjustment of the personality."<sup>25</sup>

Mrs. Gifford also believes stuttering is a personality disorder. She says:

Stammering has no organic or functional origin, but is a problem of emotional maladjustment involving the total personality. The conflicts arising from emotional maladjustments are expressed through the speech tract in spasmodic disturbances. These symptoms soon become fixed because both parents and child believe it to be a speech difficulty . . .<sup>26</sup>

Blanton<sup>27</sup> contends that stuttering is a symptom of an emotional difficulty caused by the persistence of unconscious

---

<sup>25</sup> George Wilton, How to Overcome Stuttering; A Guide to Speech Control in Conversation and Public Speaking. New York, Harpers and Brothers, 1950. pp xiii, 2.

<sup>26</sup> M. F. Gifford, Correcting Nervous Speech Disorders. New York: Prentice-Hall, 1939. p. vii.

<sup>27</sup> Smiley Blanton, in E. F. Hahn, Stuttering: Significant Theories and Therapies. Stanford: Stanford University Press, 1943. pp. 11-13.



infantile emotional reactions. Eisenson<sup>28</sup> proposes the hypothesis that stuttering itself is an indication of resistance to change, and hence a manifestation of the phenomenon of perseveration.

Coriat<sup>29</sup> defines stuttering as "a psychoneurosis caused by the persistence into later life of early pre-genital oral nursing, oral sadistic, and anal sadistic components." Despert<sup>30</sup> made a study of 15 stuttering children and found them to be characterized by maternal neurotic attitudes and oral orientation. Krout<sup>31</sup> made case studies of three juniors in college and found all of them to be actively or passively homosexual. He says the origin of symptoms seem to lie in early fixations at the oral and anal stages.

American speech correctionists, regardless of theoretical orientation, have become increasingly aware of

---

<sup>28</sup> J. Eisenson, "A Note on the Preserving Tendency in Stutterers," Journal of Genetic Psychology, 1937. 50: 195-198.

<sup>29</sup> I. H. Coriat, in E. F. Hahn, Stuttering: Significant Theories and Therapies. Stanford: Stanford University Press, 1943. pp. 27-29.

<sup>30</sup> J. L. Despert, "Stuttering: A Clinical Study," American Journal of Orthopsychiatry, 1943. 13:517-525.

<sup>31</sup> M. H. Krout, "Emotional Factors in the Etiology of Stammering," Journal of Abnormal and Social Psychology, 1936. 32:174-181.

Intensive studies have been conducted in the laboratory to determine the effect of the various factors mentioned above on the efficiency of the various types of erasers. The results of these studies are given in the following table. It will be seen that the efficiency of the various types of erasers varies considerably, and that the most efficient type is the one which is made of a special composition of materials. This type of eraser is the one which is recommended for use in the laboratory.

EFFICIENCY  
ERASER-BOND  
CONTENT

1. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 101.  
2. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 102.  
3. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 103.  
4. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 104.  
5. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 105.  
6. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 106.  
7. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 107.  
8. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 108.  
9. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 109.  
10. H. H. Goss, Journal of Applied Chemistry, 1924, 1, 110.

the importance of frustration in the etiology and development of stuttering. A recent publication by Van Riper attempts "to achieve a statement concerning stuttering that would reflect substantial agreement among professional speech pathologists."<sup>32</sup> The work was edited by Dr. Wendell Johnson after the manuscript had been submitted to twenty-three American speech pathologists for their approval. In the "Editor's Foreward," Johnson states:

There are at least a million stutterers in this country. . . . And speech handicaps are among the most frustrating and demoralizing known to man-- particularly when they are misunderstood and neglected.

In this brief treatise, Van Riper makes fourteen statements in which he associates frustration with stuttering. In the section entitled "Helping the Young Stutterer," he writes:

We have tried to show how primary stutterers first begin to evaluate their symptoms as frustrating, socially unacceptable, and distressing.

Although most young stutterers go through a prior stage of struggling when they first sense their symptoms as unpleasant, others begin immediately to retreat and avoid speaking situations. . . . The instant they sense difficulty, they retreat into tense, frustrated silence.

The effect of this retrial and surrender behavior on the development of fear and frustration can hardly

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<sup>32</sup> Charles Van Riper, Stuttering. Chicago: National Society for Crippled Children and Adults. 1948.



be over-estimated. . . . They become tarred by the brush of past frustration.

. . . . .  
 We must at all costs keep the primary stutterer from becoming aware of his symptoms as unpleasant and frustrating, if we are to nip in the bud those reactions of struggle and avoidance which bring the truly handicapping behavior of secondary stuttering.<sup>33</sup>

Literature on frustration. One of the most complete treatises on the subject of frustration is that of Dollard, et al. They support the frustration-aggression theory and state as their basic postulate ". . . the occurrence of aggressive behavior always presupposes the existence of frustration, and contrariwise, that the existence of frustration always leads to some form of aggression."<sup>34</sup> In a later publication by Miller, et al, the first part of this postulate is rephrased to read, "frustration produces instigations to a number of different types of responses, one of which is an instigation to some form of aggression."<sup>35</sup>

Basing his study primarily on animal experiments, Maier<sup>36</sup> discards the usual hypothesis that all behavior is

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<sup>33</sup> Ibid.

<sup>34</sup> J. Dollard, L. W. Doob, N. E. Miller, O. H. Mowrer, and R. R. Sears, Frustration and Aggression. New Haven: Yale University Press, 1939. p. 1.

<sup>35</sup> N. E. Miller, J. Dollard, L. W. Doob, O. H. Mowrer, and R. R. Sears, "The Frustration-Aggression Hypothesis." Psychological Review, 1941, 48:337-342.

<sup>36</sup> N. R. F. Maier, Frustration: The Study of Behavior Without a Goal. New York: McGraw-Hill, 1949.

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motivated or goal-directed. He claims that behavior which results as a response to frustration is non-goal-directed. If a subject is repeatedly frustrated in a certain direction, his resulting behavior becomes fixated and stereotyped. Re-evaluation of this non-goal-directed behavior and relearning become increasingly difficult.

Sargent also disagrees with the frustration-aggression hypothesis. He believes the crucial factor is how the individual defines and interprets the situation.

. . . both frustration and conflict involve dynamic and highly upsetting emotional states which impel toward some sort of overt behavior. . . . The nature of the frustration largely determines the basic emotional reaction, and the resulting behavior depends upon the existing habit-patterns operating in the individually defined social situation.<sup>37</sup>

In his first publication on the subject of frustration, Rosenzweig<sup>38</sup> proposed a classification of "apperceptive types of conscious reaction to frustration." He defined and used the terms extrapunitiveness, intropunitiveness, and impunitiveness much as they were later used in his Picture-Frustration Study.

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<sup>37</sup> S. Stanfield Sargent, "Reaction to frustration--- a critique and hypothesis." Psychological Review, 1948. 55:108-114.

<sup>38</sup> S. Rosenzweig, "Types of reaction to frustration: an heuristic classification." Journal of Abnormal and Social Psychology, 1934, 29:298-300.

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A year later he published the results of his first attempt to measure these reactions.<sup>39</sup> A group of fifteen subjects was given twenty-four problems to solve, an equal number of two different types. One type he termed "a sort of paper and pencil jig-saw puzzle," and the other was a scramble of letters which were to be arranged to form a word. Some were insoluble within the time limit and half of them had no solution. The results were scored as a dichotomy, extropunitive and non-extropunitive. The latter contained both the intropunitive and the impunitive types of reaction. Little attempt was made to check the validity or reliability of the test because of the small number of subjects. Rosenzweig stated that his main purpose was to point out the implications of the problem and to describe an experimental technique.

He later proposed to increase the dimensions of reaction to frustration to include the following categories: adequate-inadequate; direct-indirect; defensive-perserverative; and specific-nonspecific.<sup>40</sup> Because of the difficulty of devising a test to measure these dimensions, they

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<sup>39</sup> S. Rosenzweig, "A test for types of reaction to frustration." American Journal of Orthopsychiatry, 1935, 4:395-403.

<sup>40</sup> \_\_\_\_\_, "Frustration as an experimental problem." Character and Personality, 1938, 7:151-160.

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were later discarded or absorbed into the categories under the "Direction of Aggression" which became a part of the scoring procedure when the Picture-Frustration Study was introduced.<sup>41</sup> The first brief scoring samples<sup>42</sup> were later revised and expanded.<sup>43</sup> The tentative norms<sup>43</sup> were also revised slightly as a result of additional research.<sup>44</sup>

Brown<sup>45</sup> has modified the test by including Jewish and Negro characters in the pictures to study reactions in interracial situations involving frustration. The preliminary report indicates that it may be a valuable technique. Although results have not been subjected to a quantifying statistical analysis, Brown reports "several interesting positive findings." He concludes that "passive anti-Semitism" is the prevalent form of attitude toward this

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41 S. Rosenzweig, "The picture-association method and its application in a study of reactions to frustration." Journal of Personality, 1945, 14:3-23.

42 \_\_\_\_\_, H. J. Clark, M. S. Garfield and A. Lehndorff, "Scoring samples for the Rosenzweig Picture-Frustration Study." Journal of Psychology, 1946, 21:45-72.

43 \_\_\_\_\_, E. E. Fleming, and H. J. Clark, "Revised scoring manual for the Rosenzweig Picture-Frustration Study." Journal of Psychology, 1947, 24:165-208.

44 \_\_\_\_\_, "Revised norms for the adult form of the Rosenzweig Picture-Frustration Study." Journal of Personality, 1950, 18:344-346.

45 J. F. Brown, "A modification of the Rosenzweig Picture-Frustration test to study hostile interracial attitudes." Journal of Psychology, 1947, 24:247-272.

was later discussed in detail in the report of the  
the "Division of Psychiatry" which became a part of the  
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Although results were not statistically significant,  
positive results were obtained in the Division of Psychiatry.  
Results in the Division of Psychiatry were not statistically significant.

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41. E. H. Ross, "The Division of Psychiatry," Journal of Psychiatry, 1957, 10, 1-10.

42. J. H. Ross, "The Division of Psychiatry," Journal of Psychiatry, 1957, 10, 1-10.

43. J. H. Ross, "The Division of Psychiatry," Journal of Psychiatry, 1957, 10, 1-10.

44. J. H. Ross, "The Division of Psychiatry," Journal of Psychiatry, 1957, 10, 1-10.

45. J. H. Ross, "The Division of Psychiatry," Journal of Psychiatry, 1957, 10, 1-10.

minority group in the United States at the present time. He advances the postulate that in the genesis of the scape-goat mechanism, it is probably that projection and displacement precede rationalization of overtly hostile acts and discrimination.

Franklin<sup>46</sup> gave the Rosenzweig test to 36 male volunteers during their 24th week of semi-starvation and repeated it at the end of the 12th week of the rehabilitation period which followed. Comparison of the results of the two tests showed no statistically significant differences in any of the six categories. In his conclusions, Franklin questioned the usefulness and validity of the test. In reply, Rosenzweig stated:

When the attempt is made to validate the Picture-Frustration Study by comparing its findings with reactions to experimentally induced frustration, the definition of the induced frustration must be critically examined.

. . . Similarly it was pointed out that in a recent attempt to evaluate the effects of experimental starvation, the significance of the experience to the subjects in terms of frustration was not analyzed though the effects were naively expected to vary with P-F scores. Here, as in any investigation of validity, the independent criterion must be unequivocal.<sup>47</sup>

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<sup>46</sup> Joseph C. Franklin and Josef Brozek, "The Rosenzweig P-F test as a measure of frustration response in semi-starvation." Journal of Consulting Psychology, 1949, 13:293-301.

<sup>47</sup> S. Rosenzweig, "Some problems relating to research on the Rosenzweig Picture-Frustration Study." Journal of Personality, 1950, 18:302-305.





Fry<sup>48</sup> used the test to study the reaction to frustration in 236 college students and in 207 inmates of state prisons. The penal group included both Negro and white, males and females. All four of these sub-groups exceeded the control group in the tendency to attribute their frustration to themselves. The author concluded that the Picture-Frustration Study is valuable in measuring differences between groups.

French<sup>49</sup> gave the test to 80 college students three weeks prior to a course examination. The students were experimentally frustrated by reporting grades which had been falsified by two letter-grades, after which the Picture-Frustration test was given a second time. An analysis of the results revealed that: (1) poor students given their correct grades showed significantly fewer Intropunitive Ego-Defensive responses than poor students given high grades; (2) as a group, good students differed from poor students in showing more Intropunitive Need-Persistent and fewer total Extrapunitive responses. The results were interpreted as lending support to the validity of the test.

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<sup>48</sup> Franklin D. Fry, "A study of reactions to frustration in 236 college students and in 207 inmates of state prisons." Journal of Psychology, 1949. 28:427-38.

<sup>49</sup> Robert L. French "Changes in performance on the Rosenzweig Picture-Frustration Study following experimentally induced frustration." Journal of Consulting Psychology, 1950. 14:111-115.

The first part of the paper describes the  
work done in 1955 on the synthesis of  
various poly- $\alpha$ -amino acids and their  
properties. The authors report that  
the synthesis of these acids is possible  
in the presence of a catalyst. The  
results show that the yield of the  
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similar to those of the corresponding  
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Section in 1955 on the synthesis of  
various poly- $\alpha$ -amino acids and their  
properties. The authors report that  
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in the presence of a catalyst. The  
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poly- $\alpha$ -amino acids is high and that  
the properties of these acids are  
similar to those of the corresponding  
natural poly- $\alpha$ -amino acids.

Using the Rosenzweig test, Sinaiko<sup>50</sup> made a study of the selection of department store section managers. Qualitative measures of job efficiency were obtained from personnel review data. The criteria were found to be negatively related to both extrapunitiveness and ego-defense, and positively related to intropunitiveness and need-persistence. He suggests the test might have value in an employment selection program.

Bernard<sup>51</sup> made a study of the norms, reliability, and interpretation of the Rosenzweig test using 175 adults, the majority of whom were college students or college graduates living in New York City. He stated that the item reliability appeared satisfactory and suggested that the test might be valuable "for evaluating certain personality characteristics and predicting certain behavior patterns." For purposes of interpretation, Bernard concluded, the entire Picture-Frustration scoring categories in terms of "directional set" must be considered.

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<sup>50</sup> H. W. Sinaiko, "The Rosenzweig Picture-Frustration Study in the selection of department store section managers." Journal of Applied Psychology, 1949, 33:36-42.

<sup>51</sup> Jack Bernard, "The Rosenzweig Picture-Frustration Study: I. Norms, Reliability, and Statistical Evaluation." Journal of Psychology, 1949, 28:325-332.

———, "The Rosenzweig Picture-Frustration Study: II. Interpretation." Journal of Psychology, 1949, 28:333-343.



Changes in the nomenclature and scoring procedure were proposed. He advocated subtracting the denials from the Ego-Defense column and listing them separately. Also suggested were changes in the category names, the substitution of "Obstacle Orientation" for Obstacle-Dominance, "Blame Orientation" for Ego-Defense, and "Goal Orientation" for Need-Persistence. This, Bernard believed, would dispel from the mind of the interested worker the aggression connotation of the punitive designations.

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## CHAPTER II

### SUBJECTS, MATERIALS, PROCEDURE, AND SCORING

Subjects used for this study. Twenty-five subjects were used for this study. Thirteen of the subjects were Junior and Senior High School students; eleven from the Albuquerque Public Schools; one from St. Mary's School, (Catholic), Albuquerque; and one from the Belen Public Schools, Belen, New Mexico. Seven subjects were students at the University of New Mexico and were attending the University Speech Clinic. The remaining five subjects were adults living in Albuquerque.

Criteria for selection of subjects. All subjects were 14 years of age or older. The range was from 14 to 59 years, with a mean of 23.3 years. Only three subjects were over forty years old.

All the subjects considered themselves to be stutterers or former stutterers. Six students referred by school authorities were rejected because they did not meet this criterion. These rejections were considered valid because the subjects would have been unable to make the necessary subjective evaluation of a condition which they did not accept.

An arbitrary rule was made to accept only individuals

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were 14 years of age or over. The subjects were

years, with a mean of 16.0 years. They were

over forty years old.

All the subjects were given instructions on the

one or fewer responses. If a subject failed to

authorized were rejected because the instructions were

orientation. These subjects were considered as

the subjects would have been given the same

subjective evaluation of a stimulus when they

accept.

An explicit instruction was to respond as fully as



whose stuttering had begun previous to their twelfth birthday. This was considered necessary to eliminate cases of very recent origin which might later have proved to be only a temporary speech dysfunction.

Materials. The materials used in this study were: (a) the Adult Form of the Rosenzweig Picture-Frustration Study and, (b) a brief subjective questionnaire on stuttering prepared by the experimenter. The Rosenzweig P-F test is too well known to need further description. The subjective type of questionnaire was chosen for two reasons. In the first place, a subjective evaluation by the stutterer of the severity of his stuttering was considered more pertinent to this study than an objective evaluation. Secondly, it would have been impossible to obtain a valid objective evaluation of the stuttering, which, in many cases, had reached its greatest degree of severity at some period in the past. Only the personal data and the responses to questions 2, 6, and 7 were used in this study. A reproduction of the questionnaire is given in Figure 1, and a summary of results in Table I.

Procedure. The experimenter explained briefly that he was making a study of stuttering. The subject was told that he would be asked to fill out a short questionnaire regarding his stuttering and to take a non-verbal test. The

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Rosenzweig P-F Study was described briefly. The individuals were assured that neither their names nor their replies would be used in any way in which these data could be identified with them. They were also informed that the test was not an intelligence test and it was not scored qualitatively; i.e., there were neither right nor wrong answers. Secondary school students were further assured that the test and questionnaire were not part of the school testing program, that neither the test nor the results would be made available to their instructors, and that it would have no effect on their grades.

If the individual consented to the testing, he was asked if he considered himself to be a stutterer or a former stutterer. If his reply was in the affirmative, he was given the questionnaire to fill out. When this was completed, he was presented with the Rosenzweig P-F Study and asked to fill out the blanks on the cover. Before opening the booklet, he was requested to follow the printed instructions on the cover while the experimenter read them aloud. He was then told to turn to the first picture, read the words by the person pictured at the left, and write in the blank box the very first reply that came into his mind. When this was completed and the subject signified that he understood the procedure, he was asked to complete the remainder of the test as rapidly as possible.



Because most of the subjects were stutterers at the time the test was given, they were not asked to read their replies. The experimenter read them silently and asked the subjects to explain any replies which appeared ambiguous.

Scoring. Half of the Rosenzweig tests were scored independently by the experimenter and a graduate student who was using the P-F test in a similar study covering another subject. Scores were compared and when no agreement could be reached on the scoring of a reply, it was marked unscorable. Two of the replies were considered unscorable for this reason. Illness of the assisting graduate student made the continuation of this plan impossible. The remainder of the tests were scored by the experimenter. Two independent scores were made at an interval of ten days. These scores were later compared and clerical errors corrected. A reply on which differences in scoring appeared was carefully compared with the examples given in the manual. If no similar example could be found, the item was marked unscorable. Because of careful questioning by the experimenter of ambiguous responses made at the time of testing, only one reply was found to be unscorable. A summary of the data on the Rosenzweig P-F Study is given in Table II.



## FIGURE 1

## THE QUESTIONNAIRE ON STUTTERING USED IN THIS STUDY\*

- Name \_\_\_\_\_
- Address \_\_\_\_\_ Phone No. \_\_\_\_\_
- Age \_\_\_\_\_ Sex \_\_\_\_\_ Education \_\_\_\_\_ Married \_\_\_\_\_
1. At what age did you begin stuttering? \_\_\_\_\_
  2. At its worst, did you consider your stuttering to be  
( ) mild, ( ) medium, or ( ) severe?
  3. Did you ever receive treatment for stuttering? \_\_\_\_\_  
If so, what kind? ( ) speech training, ( ) physio-therapy,  
( ) drugs, ( ) psychotherapy, ( ) surgery.
  4. Please describe treatment briefly\*\* \_\_\_\_\_
  5. Is your stuttering less severe at present? \_\_\_\_\_
  6. Do you consider yourself to be a stutrerer now? \_\_\_\_\_
  7. If so, do you consider your stuttering at present to be  
( ) mild, ( ) medium, or ( ) severe?
  8. What do you think caused your stuttering?\*\*\* \_\_\_\_\_
  9. What do you think caused the improvement (if any)?\*\*\* \_\_\_\_\_

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\* The original questionnaire did not have a title.

\*\* Lines provided for the subject's reply have been omitted.

THE UNIVERSITY OF MICHIGAN LIBRARY

Name \_\_\_\_\_

Address \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_

1. At what age did you begin to read?

2. At the present time, do you read any newspapers?

( ) Yes, ( ) No, ( ) Don't know

3. Did you ever read a newspaper for the purpose of

getting news about the country?

( ) Yes, ( ) No, ( ) Don't know

4. Please describe the kind of newspaper

you are reading now, if any.

5. Do you consider yourself to be a regular reader?

( ) Yes, ( ) No, ( ) Don't know

6. What do you think caused your interest in

reading?

7. What do you think caused the development of your

interest in reading?

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\* The original questionnaire for this study was prepared for the Library of Congress by the University of Michigan Library. The original questionnaire is available in the Library of Congress.



TABLE I  
SUMMARY OF QUESTIONNAIRE RESULTS

Subject Number	Sex	Age	Question #2	Question #6	Question #7
1	F	23	Mild	No	
2	F	24	Severe	Yes	Medium
3	F	48	Medium	Yes	Mild
4	F	19	Severe	Yes	Mild
5	F	43	Severe	No	
6	M	15	Medium	Yes	Medium
7	M	26	Severe	Yes	Severe
8	M	22	Medium	Yes	Medium
9	M	20	Severe	No	
10	M	15	Medium	Yes	Medium
11	M	18	Medium	Yes	Mild
12	M	14	Medium	Yes	Mild
13	M	16	Severe	Yes	Severe
14	M	20	Severe	Yes	Mild
15	M	34	Medium	Yes	Mild
16	M	17	Medium	Yes	Mild
17	M	14	Medium	Yes	Mild
18	M	16	Medium	Yes	Mild
19	M	17	Mild	No	
20	M	59	Medium	Yes	Mild
21	M	31	Mild	Yes	Mild
22	M	15	Mild	Yes	Mild
23	M	15	Medium	Yes	Medium
24	M	14	Severe	Yes	Mild
25	M	28	Medium	Yes	Mild

Year	Month	Day	Time	Location	Remarks
1917	Jan	1	10:00	...	...
1917	Jan	2	10:00	...	...
1917	Jan	3	10:00	...	...
1917	Jan	4	10:00	...	...
1917	Jan	5	10:00	...	...
1917	Jan	6	10:00	...	...
1917	Jan	7	10:00	...	...
1917	Jan	8	10:00	...	...
1917	Jan	9	10:00	...	...
1917	Jan	10	10:00	...	...
1917	Jan	11	10:00	...	...
1917	Jan	12	10:00	...	...
1917	Jan	13	10:00	...	...
1917	Jan	14	10:00	...	...
1917	Jan	15	10:00	...	...
1917	Jan	16	10:00	...	...
1917	Jan	17	10:00	...	...
1917	Jan	18	10:00	...	...
1917	Jan	19	10:00	...	...
1917	Jan	20	10:00	...	...
1917	Jan	21	10:00	...	...
1917	Jan	22	10:00	...	...
1917	Jan	23	10:00	...	...
1917	Jan	24	10:00	...	...
1917	Jan	25	10:00	...	...
1917	Jan	26	10:00	...	...
1917	Jan	27	10:00	...	...
1917	Jan	28	10:00	...	...
1917	Jan	29	10:00	...	...
1917	Jan	30	10:00	...	...
1917	Jan	31	10:00	...	...

TABLE II

## SUMMARY OF DATA FROM THE ROSENZWEIG PICTURE-FRUSTRATION STUDY

Case No.	E %	I %	M %	O-D %	E-D %	N-P %	GCR %
1	25.0	33.3	41.7	14.6	50.0	35.4	83
2	29.5	45.5	25.0	25.0	40.9	34.1	67
3	39.6	35.4	25.0	16.7	35.4	47.9	50
4	29.2	33.3	37.5	20.8	50.0	29.2	75
5	54.1	29.2	16.7	25.0	58.3	16.7	58
6	25.0	43.8	31.2	8.3	79.2	12.5	79
7	45.9	22.9	31.2	8.3	68.8	22.9	67
8	47.9	27.1	25.0	14.6	60.4	25.0	83
9	43.5	21.7	38.8	10.9	56.5	32.6	79
10	27.1	31.2	41.7	10.4	64.6	25.0	62
11	31.2	39.6	29.2	4.2	62.5	33.3	71
12	35.4	43.8	20.8	14.6	52.1	33.3	67
13	35.4	25.0	39.6	25.0	50.0	25.0	67
14	31.4	39.6	29.2	8.3	52.1	39.6	58
15	41.7	35.4	22.9	8.3	62.5	29.2	75
16	6.2	54.2	39.6	4.2	58.3	37.5	50
17	29.2	41.6	29.2	16.7	58.3	25.0	67
18	72.9	10.4	16.7	14.6	68.7	16.7	58
19	56.2	29.2	14.6	8.3	58.4	33.3	50
20	33.3	45.9	20.8	12.5	52.1	35.4	75
21	29.2	37.5	33.3	16.7	47.9	35.4	67
22	60.5	16.7	22.8	8.3	60.5	31.2	58
23	58.3	16.7	25.0	10.4	45.9	43.7	46
24	39.6	37.5	22.9	18.7	52.1	29.2	83
25	19.6	34.8	45.6	19.6	39.1	41.3	58



## CHAPTER III

### RESULTS AND ANALYSIS

Introduction. On all the comparisons made in this study, the six categories of the Rosenzweig Picture-Frustration Study: Intropunitive, Extrapunitive, Impunitive, Obstacle-Dominance, Ego-Defense, and Need-Persistence, plus the Group Conformity Rating (G.C.R.), were used. No control group of normal subjects was utilized. Rosenzweig<sup>1</sup> published data on a group of 460 normal subjects; therefore, his normative group was used as a basis of comparison. In the first instance, the stutterers were grouped according to sex and compared with the Rosenzweig norms. The stutterers were then divided according to (1) severity of stuttering during its worst period, and (2) severity of stuttering at the time of testing. The subjects' replies on the questionnaire were used as a measure of the severity of stuttering. A final comparison was made possible by grouping the stutterers according to the degree of improvement indicated. This measure was derived by contrasting the "worst" ratings with the present ratings, and will be discussed in a later section.

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<sup>1</sup> S. Rosenzweig, "Revised norms for the adult form of the Rosenzweig Picture-Frustration Study." Journal of Personality, 1950, 18:344-346.



An added category, the Rosenzweig Group Conformity Rating (G.C.R.), was included in all comparisons between groups. These are presented for the purpose of making the data as complete as possible, although the validity of this dimension has been seriously questioned. Bernard<sup>2</sup> declared that the G.C.R. score does not differentiate between normals and non-institutionalized abnormals. In the scoring manual Rosenzweig has given the following explanation of this rating:

The Group Conformity Rating (G.C.R.) is obtained by comparing the subject's scores with those expected on 12 items previously found to elicit a particular variety of response from normal subjects significantly often to justify their use as criteria.<sup>3</sup>

The statistical method used was the t test of significance.<sup>4</sup> The t test endeavors to determine statistically whether or not the difference obtained in mean scores between groups may be due to chance.

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<sup>2</sup> Jack Bernard, "The Rosenzweig Picture-Frustration Study: I. Norms, Reliability, and Statistical Evaluation." Journal of Psychology, 1949, 28:325-332.

<sup>3</sup> S. Rosenzweig, E. E. Fleming, and H. J. Clarke, "Revised scoring manual for the Rosenzweig Picture-Frustration Study." Journal of Psychology, 1947, 24:165-208.

<sup>4</sup> H. E. Garrett, Statistics in Psychology and Education. Second edition; New York: Longmans, Green, 1947.





Comparison of stutterers with the normative group.

In Table III are shown the results of the comparison of the stutterers, grouped according to sex, with the Rosenzweig normative group. In the Extrapunitive category, the male stutterers, with a mean score of 38.47, differ significantly from the Rosenzweig normative group which has a mean score of 45. The male stutterers in this experiment are significantly more intro-punitive (mean of 32.73) than Rosenzweig's normative group (mean of 28). The mean score (35.34) of the female stutterers indicates an even higher intro-punitive-ness than the males when compared to the mean (28) of the female normative group. These differences are statistically significant as indicated in Table III.

The male stutterers differ very significantly (t is significant at the 1% level of confidence) from the normative male group in the Obstacle-Dominance direction. The male stutterers have a mean score of 12.15 which is only about three-fifths of the normative mean of 20 in this category.

Other differences shown in Table III will not be discussed since they do not indicate statistically significant results and the null hypothesis cannot be rejected.

Comparison of students with the normative group.

In Table III are shown the results of the comparison of the students, grouped according to sex, with the normative group. In the Extrajudicial category, the male students, with a mean score of 58.47, differ significantly from the Normative group which has a mean score of 65. The male students in this experiment are slightly more introverted (mean of 58.75) than Normative (mean of 68). The mean score (58.75) of the female students indicates an even higher introversion than the males when compared to the mean (65) of the female normative group. These differences are statistically significant as indicated in Table III.

The male students differ very significantly (7.12) at the 1% level of confidence) from the normative group in the Obedience-Disobedience direction. The male students have a mean score of 12.18 which is only about three-fifths of the normative mean of 20 in this category.

Other differences shown in Table III will not be discussed since they do not indicate statistically significant results and the null hypothesis cannot be rejected.

TABLE III  
COMPARISON OF STUTTERERS WITH THE NORMATIVE GROUP

Category	Sex	Normative Group		Stutterers		Difference between Means	t
		Mean	S.D.	Mean	S.D.		
E	M	45	13.3	38.47	15.15	6.53	2.08*
	F	45	13.1	35.48	10.48	9.52	1.61
I	M	28	8.25	32.73	11.06	4.73	2.39**
	F	28	6.6	35.34	5.46	7.34	2.46**
M	M	27	9.45	28.81	8.25	1.81	0.49
	F	28	10.2	29.18	9.12	1.18	0.26
O-D	M	20	7.8	12.15	5.23	7.85	4.70***
	F	22	8.1	20.42	4.24	1.58	0.43
E-D	M	53	11.3	57.50	8.90	4.50	1.73
	F	52	10.2	46.92	7.96	5.08	1.10
N-P	M	27	10.3	30.36	7.73	3.36	1.42
	F	26	10.3	32.66	10.08	6.66	1.43
GCR	M	68	11.1	66.00	10.71	2.00	0.78
	F	67	10.7	66.60	11.74	0.40	0.08

\* Significant at 5% level.

\*\* Significant at 2% level.

\*\*\* Significant at 1% level.



Comparison of stutterers grouped according to the severity of stuttering during its worst period. In reply to question 2 of the questionnaire, the stutterers evaluated the severity of their stuttering during its worst period. These ratings were made on a three-point scale of mild, medium, and severe. In order to obtain sufficient cases with which to make a comparison, it was decided to group the 4 cases rating themselves as mild with the 13 cases rating themselves as medium for a total of 17 cases and to compare this group with the 8 cases rating themselves as severe stutterers.

Table IV presents the comparisons on each dimension of the Rosenzweig P-F Study. Only the comparison on the Obstacle-Dominance dimension is statistically significant at the 5% level. The severe stutterers have a much higher score on this dimension than the group of mild plus medium cases, the difference between the means being 5.81. There is a reversal here of the expected trend, in that the severe group with a mean of 17.75 is much closer to the normative group with a mean of 21 (the average of male and female norms) than is the mild plus medium group with a mean of 11.94. The latter group is closer to the stutters-as-a-whole group.

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TABLE IV  
COMPARISON OF STUTTERS GROUPED ACCORDING TO THE SEVERITY OF  
STUTTERING DURING ITS WORST PERIOD

Category	Mild and Medium Stutterers N=17		Severe Stutterers N=8		Difference between Means	t
	Mean	S.D.	Mean	S.D.		
E	37.55	16.47	38.55	8.33	1.00	0.16
I	33.92	11.06	31.84	8.04	2.08	0.46
M	28.54	8.90	29.61	7.29	1.07	0.28
O-D	11.94	4.42	17.75	7.01	5.81	2.41*
E-D	56.23	10.45	53.59	7.53	2.64	0.61
N-P	31.83	8.79	28.66	6.66	3.17	0.87
GCR	64.65	11.59	69.25	8.56	4.60	0.96

\*Significant at 5% level.





Comparison of stutterers grouped according to the severity of stuttering at the present time. In reply to question 7 of the questionnaire, the experimental group gave an evaluation of the severity of their stuttering at the present time. Four subjects rated themselves as non-stutterers at the present time; 14 rated themselves as mild stutterers, 5 as medium, and 2 as severe. Because of the small number of cases in some of the groups, it was decided to combine them into two larger groups in order to have sufficient cases for comparison. The non-stutterers and the mild stutterers were combined into one group for a total of 18 cases. These were compared with a group of seven cases made up of the medium and severe stutterers. Table V presents the comparisons between these two groups. There are no significant differences apparent on any of the dimensions of the P-F Study. This may be a result of the groupings made, but lesser numbers in each group would have yielded very few cases with which to make comparisons.



COMPARISON OF STUTTERERS GROUPED ACCORDING TO THE SEVERITY OF STUTTERING AT THE PRESENT TIME

TABLE V

Category	Former and Mild Stutterers N=18		Medium and Severe Stutterers N=7		Difference between Means	t
	Mean	S.D.	Mean	S.D.		
E	37.64	15.34	38.44	11.58	0.80	0.15
I	34.39	10.13	30.31	9.94	4.08	0.87
M	27.96	8.91	31.24	6.50	3.28	0.85
O-D	13.50	5.64	14.57	6.88	1.07	0.38
E-D	54.16	7.94	53.54	8.84	4.38	1.13
N-P	32.34	7.48	26.89	9.01	5.45	1.48
GCR	65.67	10.81	67.29	11.12	1.62	0.32

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Comparison of stutterers grouped according to the degree of improvement. It was possible to obtain a rough measure of the degree of improvement made by the stutterers by comparing the evaluation of the severity of stuttering at the present time (question 7 on the questionnaire) with the rating of the stuttering during its worst period (question 2). A change from severe to medium, medium to mild, or mild to cured was considered one degree of improvement; from severe to mild, or medium to cured, two degrees, and so forth. Thus several degrees of improvement were noted. There were 8 who indicated they had made no improvement; 12 cases showed an improvement of one degree on the scale; 3 cases rated themselves as having improved two stages; and 2 cases rated themselves as having improved three stages. In order to have a sufficient number in each group, it was decided to compare the 8 cases who had made no improvement with the group of 17 cases which had indicated some degree of improvement.

The two groups were compared on all dimensions of the P-F Study and the results shown in Table VI. Only the difference on the Intropunitive dimension emerged, which almost reached significance. The group rating themselves as having no improvement had a mean score in this category of 27.61 which is 8.30 points less than the "Some Improvement" group



with a mean score of 35.91. The  $t$  of this difference is 1.96 which is almost significant at the 5% level of confidence. Here again may be noted a reversal in trend as compared with the data<sup>a</sup> in Table III. The "No Improvement" group with a mean of 27.61 is much nearer the Rosenzweig normative group with a mean of 28 than it is the stutters-as-a-whole group with means of 32.73 for males and 35.34 for females.





TABLE VI  
COMPARISON OF STUTTERS GROUPED ACCORDING TO THE  
DEGREE OF IMPROVEMENT

Category	Some Improvement N=17		No Improvement N=8		Difference between Means	t
	Means	S.D.	Mean	S.D.		
E	36.32	14.71	41.16	13.09	4.84	1.20
I	35.91	9.73	27.61	8.95	8.30	1.96
M	27.78	9.01	31.23	6.45	3.45	0.93
O-D	14.29	6.23	12.75	5.47	1.54	0.57
E-D	53.37	8.48	59.66	10.08	6.29	1.56
N-P	32.34	7.66	27.59	8.69	4.75	1.33
GCR	66.12	10.96	66.13	10.85	0.01	0.002

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## CHAPTER IV

### SUMMARY AND CONCLUSIONS

Twenty-five subjects were used as the experimental group in this study. There were twenty males and five female subjects, all of whom considered themselves to be either stutterers or former stutterers. Thirteen of the subjects were high school students; seven subjects were students at the University of New Mexico; and the remaining five subjects were adults living in Albuquerque. It was the purpose of this study to compare the responses of a group of stutterers on the Rosenzweig Picture-Frustration Study with the norms established for that Study to determine whether or not, as a group, they showed any significant differences in (1) the direction of aggression, and (2) the type of reaction to frustration. In addition to being tested with the P-F test, each subject filled out a brief questionnaire on the history of his stuttering. Comparisons were made between the stuttering group and the Rosenzweig normative group of the six categories and G.C.R. dimension of the P-F Study. Other comparisons were made between groups of stutterers who were divided on the basis of their replies on the questionnaire. The results of these comparisons and a discussion of them is presented in the following paragraphs.



1. Both male and female stutterers had significantly higher mean scores on the Intropunitive dimension than the Rosenzweig normative group. If this is interpreted, as Bernard suggests, in terms of "directional set," it may support Abbott's hypothesis that stutterers have a need for self-punishment. The unconscious reluctance of some stutterers to discard their secondary mechanisms during treatment, Abbott postulates, may be due to their need for self-punishment as an atonement for repressed hostility toward the listener.

2. On the Extrapunitive dimension the male stutterers had a mean score which was significantly lower than the normative group. The female stutterers had an even lower mean score on this dimension, but the difference was not statistically significant. These results were interpreted as supporting Abbott's postulate as proposed above.

3. The mean score of the male stutterers was significantly lower than the normative group on the Obstacle-Dominance dimension. But the large difference noted here may be in part a statistical artifact. As a result of the scoring technique, the sum of the differences between the means of the three dimensions comprising the broader category of Types of Reaction, is always zero. Thus a large negative difference on the Obstacle-Dominance dimension may be in part the result of large positive

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differences on the Ego-Defense and Need-Persistence dimensions, although neither of the latter differences, separately, may be statistically significant. The mean for the female stutterers on the Obstacle-Dominance dimension was near the mean for the normative group. Additional investigation of this problem is indicated.

4. When the group of the subjects who considered their stuttering to be severe during its worst period was compared with the remainder of the experimental group who rated their stuttering as medium or mild during this same period, another statistically significant difference emerged. The severe stutterers had a significantly higher mean score on the Obstacle-Dominance dimension than the group of mild and medium stutterers. It is postulated that the severe stutterers' increased obstacle orientation may be associated with their increased awareness of the stuttering symptoms as being frustrating.

5. An apparent reversal of the expected trend was noted when a group of stutterers, who considered there had been no improvement in their stuttering, was compared with the remainder of the experimental group who indicated some improvement in their stuttering. On the Intropunitive dimension, the mean score of the "No Improvement" group was very close to the Rosenzweig norms and much lower than the mean score for the "Some Improvement" group, although the





difference did not reach statistical significance at the 5% level of confidence. At present no explanation can be offered for this reversal of the expected trend.

6. A comparison of stutterers grouped according to the severity of their stuttering at the time of taking the test was unproductive of significant differences.

7. The results of this study indicate that the Rosenzweig Picture-Frustration Study may be valuable for the purpose of measuring differences between groups of stutterers and normal speakers.

8. It is also tentatively suggested that the P-F Study may be useful for measuring differences between stutterers grouped according to the severity of stuttering or the degree of improvement. The lack of significant results in this section of the study may have been due to the method of grouping made necessary by the small number of subjects.

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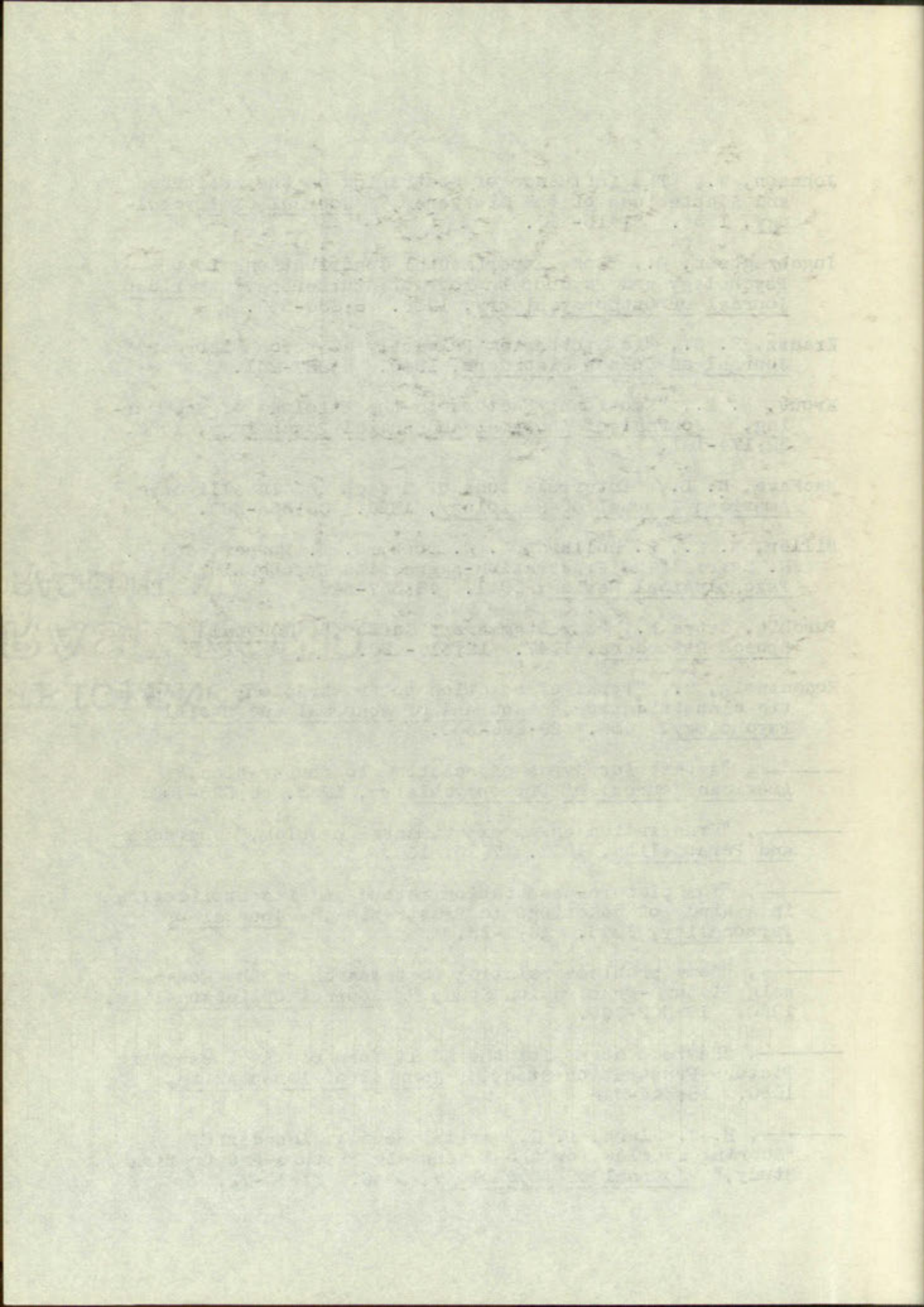
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