EXAMINATION OF THE EASE OR DIFFICULTY OF RESOLVING AN APPROACH-APPROACH CONFLICT

A Thesis

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Master of Science

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by

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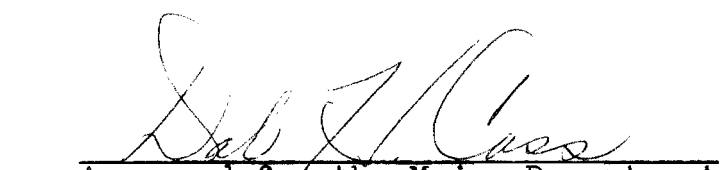

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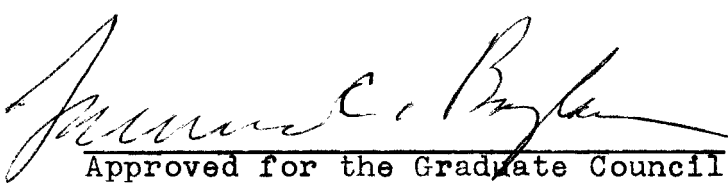

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CHAPTER I

INTRODUCTION

An almost perfect dichotomy between the belief in the ease of resolution and the belief that difficulty is encountered when facing an approach-approach conflict situation exists in the literature today. Two schools of thought are exemplified by the following analogies. The first is that of Buridan's ass starving between two stacks of hay that are equidistant from the ass. The second is that of a pencil balanced on its point, that will not remain on its point, once it has leaned in any direction to the slightest degree.

This study was directed toward a resolution of this controversy. An experiment was conducted to present to the subject (S) the conditions of an approach-approach conflict. The latency when these conditions were present was then compared with that when conditions of no-conflict were present.

I. THE PROBLEM

The problem was one of determining the strength of approach-approach conflict in relation to that of a no-conflict situation.

Statement of the Problem. Is there a significant

difference between the latency of response when approach-approach conflict is induced and the latency of response when conditions of no-conflict exist?

Statement of the Hypothesis. H_o=There is no significant difference between the latency of response when conditions of approach-approach conflict exist and when conditions of no-conflict exist.

Significance of the Study. If the H_o, that no difference exists was accepted, no evidence has accrued supporting the difficulty of resolution of approach-approach conflict. If, on the other hand, a significant difference was detected, this offers evidence supporting the difficulty of resolution of approach-approach conflict.

II. DEFINITIONS OF TERMS

Five operational definitions were necessary for this study. The remaining definitions are documented and footnoted.

Latency. Latency was defined as the amount of time lapse between the presentation of the reward(s) and the temporal termination of the subject's drawn line.

Vacillation. Vacillation was defined as an intersection of an imaginary line that bisected the paper longitudinally into two equal parts.

Significance. Significance was defined for this study as that level of confidence where $p \leq 0.05$ for a given t ratio.

Approach-approach conflict. Approach-approach conflict was defined as a situation in which the individual is confronted with identical alternatives having a positive valence.

No-conflict. No-conflict was defined as a situation in which the individual is confronted with but one alternative having a positive valence.

Positive Valence. (K. Lewin) That property of an object or region in the life space by virtue of which the object is sought.[1]

Avoidance-avoidance conflict. The situation in which an animal, if he moves away from one undesirable situation, moves toward another undesirable one.[2]

Approach-avoidance conflict. A situation in which the stimulus to approach and the stimulus to avoid are in approximately the same "locality" - literally in space, or psychologically in the life space.[3]

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[1]Horace B. English and Ava C. English, Dictionary/ Psychological and Psychoanalytical Terms (New York: David McKay Co. Inc., 1958), p. 574.

[2]Ibid., p. 57

[3]Ibid., p. 39.

H_o. H_o is a symbol representing a null hypothesis.[4]

Null Hypothesis. A null hypothesis is defined as a "hypothesis of 'no difference' in tests of significance."[5]

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[4]Allen L. Edwards, Statistical Methods (New York: Holt, Rinehart and Winston, Inc., 1967). p. 382.

[5]J. E. Freund and F. J. Williams, Dictionary/Outline of Basic Statistics (McGraw-Hill Book Co., 1966), p. 31.

CHAPTER II

Much of the work done by researchers concerning approach-approach conflict has been in the nature of comparing this type of conflict with either avoidance-avoidance or approach-avoidance conflict. This is related to the study at hand but only incidentally.

I. LITERATURE IMPLYING EASE OF RESOLUTION OF AN APPROACH-APPROACH CONFLICT

A recent publication by Kendler indicated the ease with which an approach-approach conflict may be resolved:

> In an approach-approach conflict the organism is caught between two attracting (positive) goals. . . . Ordinary approach-approach conflicts usually present no great difficulty. Shall I get a coke at the drugstore or the restaurant? Which seat shall I occupy at the movie? Typically, such conflicts are easily resolved.[6]

Miller did not consider the competition between two approach responses to represent a realistic dilemma. When he wrote concerning approach-approach competition he stated:

> Thus the situation is one of unstable equilibrium, like the pencil balanced on its point, which, as soon as it starts, has an ever-increasing tendency to continue falling, and hence never reverses its

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[6]Howard H. Kendler, Basic Psychology (New York: Appleton-Century-Crofts, 1963). p. 412.

> direction. Since it is extremely unlikely that the two alternatives will be perfectly balanced, and since even in such cases a slight distraction will be likely to upset the equilibrium, choices between purely desirable alternatives will be expected to be made quickly without vacillations.[7]

Williams, utilizing white laboratory rats as subjects in an experimental situation, compared starting latency and running time when they were faced with a choice between equal rewards at the end of each leg of a T maze with that when one leg of the maze was blocked. Williams concurred with Miller's findings when he wrote:

> The latency scores give little evidence that the rats tended to retard their approach to the choice point. The sum of the evidence gives almost no support to the hypothesis than [that] an approach-approach conflict situation generates any real conflict behavior.[8]

Hovland used an apparatus consisting of two light bulbs, capable of being turned on either one at a time or simultaneously, to compare latency of drawing a line when conditions of approach-approach conflict were present and when no-conflict was present. The S was requested to draw a line to the light bulb, located on an upright, that was lit. After twenty trials when only one light bulb was lit, the experimenter (E) then turned on both light bulbs simultaneously. Latency of

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[7]J. McV. Hunt (ed), Personality and the Behavior Disorders, I (New York: The Ronald Press Co., 1944), 431-65.

[8]Stanley B. Williams, "A Note on Approach-approach Conflict in Rats," Journal of Comparative and Physiological Psychology, 35:269-74, 1943.

the twentieth trial, when only one light bulb was lit, was compared with that of the twenty first trial, when both light bulbs were lit. He wrote:

> Subjects were trained to draw a line from a central point between two light bulbs toward the one which was illuminated. After training, simultaneous flashing of both lights produced little conflict, most subjects making complete reactions toward one or the other light.[9]

II. LITERATURE IMPLYING DIFFICULTY OF RESOLUTION OF AN APPROACH-APPROACH CONFLICT

The difficulty of resolving an approach-approach conflict appeared to be accepted by Munn, Fernald, and Fernald when they stated:

> Often we must choose between two equally attractive objects or events. Shall I buy chocolate or vanilla? Cotton or wool? The legendary donkey, flanked by equally enticing and equidistant bales of hay, is said to have starved in the midst of plenty. A situation of this type, called an approach-approach conflict may be represented as follows: [diagram inserted here in original].[10]

Coleman accepted the severity of conflict between two approach responses when he stated:

> Double-approach conflicts involve competition between two or more desirable goals. On a simple level the individual may have to decide between two movies or two makes of automobiles, or between

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[9]R. S. Sears and C. I. Hovland, "Experiments on Motor Conflict II, Determination of Mode of Resolution by Comparative Strengths of Conflicting Responses," Journal of Experimental Psychology, 28:280-86, 1941.

[10]Norman L. Munn, L. Dodge Fernald, Jr., and Peter S. Fernald, Introduction to Psychology (2d ed.; Boston: Houghton Mifflin Co., 1969), p. 504.

> steak and fish for dinner. In more complex cases he may be torn between duty and ambition, between loyalty to his mother and to his wife, between a legal and a medical career, or between present satisfactions and future ones.[11]

Converse, when writing of approach-approach conflict, appeared to accept the difficulty of resolution of this type of conflict when she wrote:

> This repeated necessity of choice can probably either intensify the magnitude or salience of both values in the pair, or-under the strain of consistant deprivation-turn one value completely negative (e.g., the "sour grapes" effect).[12]

Godbeer utilized a procedure similar to the present experiment to delineate factors introducing conflict in children. However, when equally attractive alternatives were sought, the experimental group equated the desirability of the choices. This would introduce undesired bias in the present experiment. After equating the desirability of the choices, it would be improbable that the children stopped thinking about their relative values. This could have reduced the conflict before the alternative choices were presented. She stated:

> In both trials the subjects were confronted with a piece of candy in one window and the number of soldiers he had stated was equal to the candy [italics

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[11]James C. Coleman, Abnormal Psychology and Modern Life (3d ed.; Glenview: Scott, Foresman & Co., 1964). p. 84.

[12]Elizabeth Converse, "The War of All Against All; A Review of the Journal of Conflict Resolution, 1957-1968," Journal of Conflict Resolution, December, 1968, pp. 471-532.

not in the original] in the other.[13]

While no one questions the existence of approach-approach conflict, the question of its ease of resolution, as a theoretical question, certainly does exist. A review of the literature reveals a lack of empirical data concerning this question.

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[13]Elizabeth Godbeer, "Factors Introducing Conflict in the Choice Behavior of Children" (unpublished Master's thesis, Yale University, 1940), p. 25.

CHAPTER III

METHODS AND PROCEDURES

The study was divided into three phases. These phases are explained in this chapter.

Pilot Study

The pilot phase was for the purpose of correcting any errors in the use of the presentation device as well as to find the most appropriate verbal directions to encourage the subjects to respond correctly.

Subjects. The subjects (Ss) for the pilot phase were a group of seven neighbor children and the experimenter's three children. They ranged in age from six to thirteen years old.

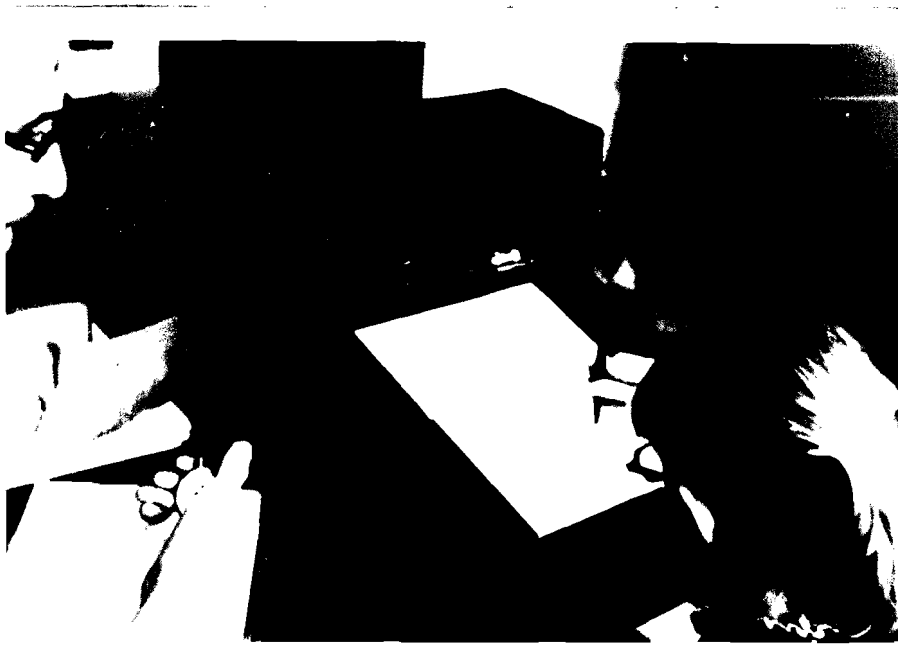
Apparatus. An apparatus to facilitate simultaneous presentation of two rewards to the subject was utilized for the pilot phase of the experiment. Two three inch doors, attached to one operating lever that was located on the side of the apparatus away from the S, concealed the reward or rewards. On the S's side of this presentation device was a ramp capable of accomodating an eight and one half by eleven inch sheet of paper. This ramp had a rise of three inches per foot, rising as progress was made from the start position to the goal position.

Two paper-clamps, removed from clip-boards, were attached to this ramp to hold the paper stationary. A one half by one fourth inch board was located at the bottom of the ramp to facilitate proper allignment of the paper. A small mark was placed on this board to insure that the pen was placed in the exact center at the beginning of each trial. Flat black paint was used to cover the entire visable surface of the presentation device. This piece of apparatus was constructed by the experimenter from one fourth inch plywood and two inch by two inch boards to act as a framework. A "Flair" pen and twenty sheets of "Mimeo Bond" paper were utilized to record the behavior of the Ss. The paper was bisected by a line at the conclusion of the experiment if there was a question of vacillation. This line extended parallel to the longest edge of the paper, from one of its shortest edges to the other. Twenty "pennys" were used as rewards. An accurate stop-watch was employed for purposes of timing.

A photograph was taken of the apparatus while in operation (see plate 1). Although this was not taken while the actual experiment was in progress, it replicates the situation as near as possible. The inclusion of this is an effort to further clarify the operations in the experiment.

Procedure. The two alternatives were presented to one half, or five children, in the pilot study first. The other five children had only one choice on the first

Apparatus in Operation Depicting
a No-conflict Situation



trial. After this, a reversal was made and the children who had a choice between two alternatives were given only one choice. The children who had been given only one choice were then given alternative choices.

Results. Through this pilot study it was found that the apparatus worked well. However, it was found necessary for the experimenter to sit to the left of the S to be able to see when the S's line was terminated. It was felt that if the youngest S in the pilot study, who was six years old, could follow the instructions, the Ss in the experiment proper would have no difficulty doing so. However, this conjecture was found to be erroneous.

Checking "Tootsie Roll" for Reward Value

The second phase of the experiment was to determine if "Tootsie Roll" can be construed as rewarding to third grade pupils.

Subjects. The Ss for the second phase of the experiment were twenty third grade pupils from the Central Heights Elementary School at Richmond, Kansas. The Ss ranged in age from eight to ten years. There were ten male and ten female Ss.

Apparatus. In the second phase of the experiment, twenty "penny" pieces of candy were utilized. The brand called "Tootsie Roll" was used.

Procedure. The experimenter introduced himself to one of the third grade classes at Central Heights Elementary School at nine A. M. After determining that no allergic reactions would result in any of the children from injesting chocolate candy, the experimenter (E) started to tell the children:

> "I would like to find out if children like 'Tootsie Roll'. You may eat the candy now or save it for later. If you want one, raise your hand and I will give you one of the 'Tootsie Roll'."

When the E said, "I would like to find out if children like 'Tootsie Roll'," the entire class raised their hands.

Results. The conclusion drawn from the second phase was that "Tootsie Roll" can, in fact, be construed as rewarding to third grade pupils.

Experiment Proper

The third phase of the experiment was for the purpose of determining the relative ease of resolution of an approach-approach conflict when compared with conditions of no-conflict.

Subjects. The Ss for the third phase of the experiment were comprized of nineteen students in attendance in the other third grade classroom at Central Heights Elementary School. Their age range and relative representation of the sexes were equivalent to the Ss in the second phase of the experiment. It became necessary to delete some of the Ss, for various reasons, from this

phase of the experiment. One male S requested directions after the doors of the previously described apparatus had been opened. It was felt that the directions were not understood by this S. One male S drew a line from the start position directly to a point half way between the doors. No latency measure could be taken on this S. One male S was absent on the day that one of the trials was scheduled. This reduced the number of male Ss to eight. Since there were eight girls in this classroom, and no logical reason was found to delete any of them, it was decided by the E to incorporate sixteen subjects into the final phase of the experiment.

Apparatus. The apparatus used in the third phase of the experiment was the presentation device utilized in the first phase of the experiment, as well as the same type of paper, and the "Flair" pen and stop-watch. The candy found to be rewarding in the second phase of the experiment, was utilized as a reward.

Procedure. The E arrived at the classroom where the experiment proper was conducted at five minutes after nine in the morning. As this was very near the time at which the second phase of the experiment was conducted, it could safely be assumed that "Tootsie Roll" candy was rewarding. After introducing himself and determining that no allergic reactions would result in any of the children from injesting chocolate candy, the E had a

screen erected to close off an area that contained a table, some chairs, and the previously described apparatus. A list of names of the children in the class was obtained from their teacher. A reward, consisting of a "Tootsie Roll", was placed behind one of the doors of the presentation device and the doors were closed. A piece of paper was attached to the ramp by means of the previously mentioned clamps. The E then stood up and called the first S's name. These were called in alphabetical order. Then the E seated himself at the table facing the left side of the presentation device. When the S arrived at the testing booth, he was seated facing the apparatus and given these instructions:

> "O.K., see the pencil." (At this point, the E placed the pencil at the mid-point of the lower edge of the paper.) "All right, take the pencil in your hand. Now, I am going to let both doors drop down. Then you draw a line to the thing in the box that you want. You get to keep the thing you draw the line to. Now you tell me what you are going to do."

When the S repeated the instructions to the E's satisfaction, the S was then asked:

"Are you ready?"

If the reply was in the affirmative, the doors were opened revealing the reward. Timing was begun at the instant the doors were opened and continued until the S had terminated the line he had drawn. The latency and presence of vacillation were noted and the child allowed to return to his seat. This procedure was repeated until a total of four boys had successfully completed

the experiment. Placement of the candy was determined by the use of random numbers. This was modified in a manner that insured an equal number of presentations at each door. This constituted a no-conflict situation.

When the remaining boys were called, a reward had been placed behind each door. They were seated in the same chair as had previously been used and given the same directions. The latency and presence of vacillation were noted and the S allowed to return to his seat. This constituted conditions of approach-approach conflict.

A procedure identical to the foregoing was then followed for the girls in the same classroom.

A period of one week was allowed to lapse. At the end of that time, the Ss who had previously been presented with the two alternatives were presented with only one alternative. The students who had been presented with only one alternative were presented with the two alternative rewards. The Ss were taken in alphabetical order as before. The method of presentation, as well as the time lapse, was designed to eliminate the confounding variable of order effects. All other relevant independent variables were controlled for by the use of Ss as their own controls.

Limitations. Although this study was designed specifically for the purpose of comparing the difficulty of resolution of approach-approach conflict with that of a no-conflict situation, a comparison was not made

between the difficulty of resolution of approach-approach conflict and that of approach-avoidance or avoidance-avoidance conflict.

CHAPTER IV

RESULTS

The difference in latency between conditions of no-conflict was compared with that when conditions of approach-approach conflict existed. To determine if the difference between the means was significant at the 0.05 level, a *t* test for correlated observations was utilized. This procedure was for the purpose of detection a "critical region", or a numerical value, above which the H_o was rejected and the alternate hypothesis that a difference is present was accepted.

A comparison of the latency, showing the raw scores, between conditions of approach-approach conflict and those of no-conflict are included in Table I.

Table II is composed of the statistical results that were found.

Using Table V, Table of *t* for different levels of significance, in Statistical Methods by Edwards,[14] it was found that, with 15 df, a calculated *t* score of 1.753 was necessary for a significant difference at the 0.05 level of confidence. Since a calculated *t* score

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[14]Allen L. Edwards, Statistical Methods (New York: Holt, Rinehart and Winston, Inc., 1967), p. 382.

Table I

Comparison of Raw Score Latency Between Approach-approach and No-conflict

		LATENCY					
S	SEX	1st SESSION		2nd SESSION		VAC	NOTES
		APP-APP	NO-C	APP-APP	NO-C		
1	M		1.5	2.2		NO	
2	M		---	1.0		NO	DELETE NOT TO DOOR
3	M		6.2	3.2		NO	
4	M		2.8	2.8		NO	
5	M		---	3.3		NO	DELETE "DRAW A LINE"
6	M		1.6	5.5		NO	
7	M	17.0			5.0	NO	
8	M	4.7			2.3	NO	
9	M	3.6			2.7	NO	
10	M	1.4			---	NO	DELETE ABSENT FOR NO-C
11	M	3.8			2.8	NO	
12	F		4.8	3.4		NO	
13	F		1.8	2.6		NO	
14	F		1.8	2.2		NO	
15	F		2.6	3.2		NO	
16	F	5.8			1.8	NO	
17	F	2.2			1.7	NO	
18	F	2.2			1.3	NO	
19	F	2.4			1.4	NO	

Table II

STATISTICAL RESULTS

Latency of resolution

	Approach-approach conflict	No-conflict
Mean	4.175	2.631

Measures of variability

	Approach-approach conflict	No-conflict
Range	14.8	4.9
Standard Deviation	3.61	1.46

The t test for the difference between two means

t score	1.89

of resolution of an approach-approach conflict is significant as compared to no-conflict. Since the alternate hypothesis was accepted, it can be stated with ninety five per cent assurance that a conflict of the approach-approach variety is difficult to resolve as compared to no-conflict. In other words, this difference would only occur by chance five in one hundred times.

No vacillations were observed when conditions of approach-approach conflict or no-conflict were present.

CHAPTER V

DISCUSSION AND CONCLUSIONS

While no one questions the existence of approach-approach conflict, its potency is certainly questioned. A review of the literature shows a lack of empirical data concerning this question. The purpose of this study was to gather this data and either offer evidence for the difficulty of resolving an approach-approach conflict when compared with that of no-conflict, or of pointing to a need for further study.

There is a significant difference in latency when comparing the latency of approach-approach conflict with that of no-conflict. Although the subjects in the experiment proper were all third-graders, there is no apparent reason for assuming that these results would not obtain if older subjects were used.

The two previously mentioned analogies, of the ass starving between two bales of hay and the pencil balanced on its point, both appear to be "false analogies" as neither follows logically from the data gathered in this study. The data point rather to a middle position; namely that the difficulty of resolution of an approach-approach conflict is significant, though not unresolvable.

This may be a case where extrapolation from

lower organisms to humans is unwarrented. Since the studies of the difficulty of resolution of approach-approach conflict appear to have been done mostly with rats, and since very little evidence has accrued for this difficulty, it appears probable that rats are incapable of experiencing this type of conflict to any great degree. Since rats are not attributed cognition and they certainly do not possess the ability of verbal mediation, this could preclude the generation of approach-approach conflict. A rat's responses appear to be more of a mechanical sort or merely a connection between a stimulus and a response. It seems reasonable to assume that this explains the fact that Dollard and Miller,[15] who worked with rats, found no evidence for this difficulty of resolution of approach-approach conflict while Lewin,[16] working with human subjects, found this evidence. This points the way for further experimentation, progressing up the phylogenetic scale, with apparatus of this type, modified to accomodate the different organisms.

The reference point at which an experimenter starts probably has a great deal of bearing on the conclusions arrived at. If approach-approach conflict is compared

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[15]J. McV. Hunt (ed), Personality and the Behavior Disorders, I (New York: The Ronald Press Co., 1944), p. 431-65.

[16]Kurt Lewin, A Dynamic Theory of Personality (New York: NcGraw-Hill Book Co., 1935), p. 123.

with approach-avoidance or av. lance-avoidance conflict, it would appear that the difficulty of resolution of approach-approach conflict is insignificant. This is analogous to the child who looks up at his father, who is five feet eight inches tall and says, "He is tall." When this same man is with a team of basketball players, people might say, "He is short." The controversy concerning the ease or difficulty of resolution of an approach-approach conflict may always remain a relative question. The present study does not demonstrate this. However, an idea generated from this thesis is a comparison of a no-conflict situation with an approach-avoidance and also with an avoidance-avoidance conflict. It is reasonable to assume that a comparison of this type would be useful in that a common reference point would be available.

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