By 1940, Lewin was accepted as one of the country’s outstanding experimental and theoretical psychologists. He had already published the pioneer ideas on the use of mathematics in formal theory through his topological and vector psychology. He had brought into the vocabulary of psychological theory such concepts as field force, level of aspiration, life space, tension, and valence. He had devised experiments for such resistant phenomena as anger, conflict, decision, frustration, intention, satiation, and substitution.

"Psychologists," as Gardner Murphy recalls, “began everywhere to talk about aspiration level in the spirit of Kurt’s pupil Hoppe, and the Zeigarnik effect related to memory for completed and uncompleted tasks.” Then came the Barker-Dembo-Lewin study of dedifferentiation as a consequence of frustration, as well as the Lewin-White-Lippitt studies of authoritarian, laissez-faire, and democratic modes of organizing groups of boys. These soon became as well known, says Murphy, as Albert’s rat (described by Watson) and the insight behavior of apes (observed by Köhler). It became clear to Murphy that “Lewinian psychology was rapidly elevated to a position of great importance.”
The two studies Murphy refers to, on "Frustration and Regression" and on "Democratic and Autocratic Leadership," had implications for a wide variety of psychological problems, and Lewin and his colleagues approached them with their unusual theoretical and methodological sophistication. The first study, "Frustration and Regression," did more than produce an objective verification of the hypothesis that regression occurs under conditions of frustration; it also added something of historic importance to the entire discipline of psychology.

Earlier studies, particularly Tamara Dembo’s on anger done at the Berlin Psychological Institute, had shown that subjects who are frustrated in direct actions leading toward their goals sometimes seek roundabout routes and at other times give up temporarily or altogether. The Iowa experiments were designed to take the inquiry one step further. The study aimed to determine what the behavioral effects of frustration are and how they are produced. They considered this a question of major importance and designed the experiment to test the hypothesis that frustration effects in a variety of ways the level of both intellectual and emotional behavior. To accomplish this, they set out to compare the behavior of young children in a normal situation and in a frustrating one.

Erik Wright, who was part of the Iowa group, conducted a second experiment using a similar procedure and adding observations on the effect of frustration on the social relationship of children. To obtain this data, he conducted his experiment with 78 children in pairs, while Barker, Dembo, and Lewin observed their 30 children individually; the children ran from two to six years of age. Both experiments used play situations well within the everyday experience of small children and in which the youngsters could exercise constructive imagination.

The experimenters wanted to find out what frustration did to intellectual and emotional behavior, especially the constructive or creative qualities of children’s activities. The basis for rating con-

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structiveness was the richness of the play activity in which the child engaged. Thus the experimenters set up a continuum which ranged from free, simple, little-structured activity to imaginative, highly developed play. The former was rated of low constructiveness; the latter, high. Great care was taken to establish the best possible conditions for constructive play and for the establishment of a feeling of security among the children.

In the non-frustration phase of the experiment, each child was led individually into a room which contained conventional play materials and was left to play alone. The experimenter sat at a desk pretending to be absorbed in his own work but actually making records of the behavior he observed. At the end of thirty minutes, the experimenter walked to the middle of the room and lifted a wire-mesh screen which had closed off half the room. In the “just opened” section, there were a number of new, attractive, and exciting toys and the children were encouraged to play with them. They soon were duly absorbed and thoroughly fascinated. This part of the experiment was designed to develop highly desirable goals for the child which he could later be prevented from reaching. This was a prerequisite to creating frustration.

After the child had become deeply absorbed, the experimenter interrupted the play and led the child to the “old” part of the room. The experimenter then lowered the wire partition and fastened it with a padlock. The exciting toys were still fully visible to the child but were now physically inaccessible. The experimenter returned to his desk, leaving the child to do as he desired with the old toys. Thus began the frustration phase of the experiment. The situation brought out two easily recognized kinds of behaviors. The first related to accessible goals—playing with the conventional toys, talking, etc. The second related to inaccessible goals—trying to reach the toys behind the barrier, coaxing, complaining, making efforts to remove or break the wire partitions, etc.

Records of play for the two periods were then compared and rated for constructiveness. It was found, not surprisingly, that after the wire screen was lowered and locked, the children spent an average of more than one third of the time trying to penetrate the bar-
rier or to escape from the room. A rating of the creativity of the children's various play activities disclosed that the "free" compared with the "frustrated" situations entailed a strikingly different level of constructiveness. As might be expected, the free period had the higher rate.

For the group as a whole, the experimenters found that the higher the level of frustration, the less creativity and the less time given to constructive play during the period. The experiment indicated that in frustration the children tended to regress to a surprising degree. They tended to become babyish. Intellectually, children of four and a half years tended toward the behavior of a three-year-old. The degree of intellectual regression varied directly with the strength of the frustration. Change in emotional behavior was also recorded. There was less smiling and singing and more thumbsucking, noisiness, and restless actions. Aggressiveness also increased and some children went so far as to hit, kick, and break objects. There was a 30 per cent rise in the number of hostile actions toward the experimenter and a 34 per cent decrease in friendly approaches.

Erik Wright, who conducted his experiment with pairs of children, reported differences in behavior when the two youngsters were close friends. In this situation, the two felt strong enough to attack the superior adult power. Thus, when physical attacks on the experimenter were considered, almost 90 per cent were carried out by strong friends and only 10 per cent by weak friends.

The authors summarized their main findings as follows: "Frustration as it operated in these experiments resulted in an average regression in the level of intellectual functioning, in increased unhappiness, restlessness, and destructiveness, in increased ultra-group unity, and in increased out-group aggression. The amounts of increase in negative emotionality were positively related to strength of frustration."

In another 1941 paper, "Regression, Retrogression, and Development," Lewin drew an important distinction between retrogression and regression. He described retrogression as "the return to a type of behavior characteristic of a previous stage of the life history of the individual," a going back to a less mature state which the indi-
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individual had already outgrown. Regression, on the other hand, was "a change to a more primitive behavior, regardless of whether such behavior has actually occurred within the life history of the individual."

The autocracy-democracy study was the second of the noteworthy inquiries of this period that demonstrated Lewin's bold experimental design. Ronald Lippitt, telling of the inception of this study, says, "During the first month of the fall semester, a memorandum went to all new graduate students with suggestions by the professors for possible master's thesis topics. One of those listed under Dr. Lewin's name was a study of groups and influence structures. My undergraduate work at Springfield College had aroused in me a strong interest in problems of leadership, particularly the effect that different kinds of leaders had on children in character-building agencies. So I made an appointment to discuss this with Lewin. I was soon telling him about leadership and various group work situations I had observed or been involved in, and my idea about studying the influence of various kinds of leadership. He was almost immediately enthusiastic, and we soon got around to talking about autocracy and democracy. He encouraged me to write up a proposal for a study that would compare autocratic and democratic leadership of children's groups. It wasn't until some time later that I discovered that Lewin's original intent, when he had listed the topic, had been to start a mathematical study of the concept of groups as interdependent wholes, with an analysis of the idea of influence structures as one approach. But Lewin's style of fragmentary listening and enthusiastic projecting led to a blending of his thoughts and mine into a worthwhile field experiment."

During the next term, after Lippitt's thesis was completed, Ralph White arrived at Iowa as a General Education Board postdoctoral fellow interested in political science. As Lippitt's experiment involved the kind of research White wanted to do, he worked

with Lippitt and Lewin to plan a broader experiment, using autocratic and democratic styles of group leadership. This was the first of a series of investigations elaborating upon the relationship between leadership, group atmosphere, and consequent group accomplishment.

As Lippitt described the situation: "Kurt, Ralph, and I planned a more adequate complete experiment on autocratic and democratic styles. During the first or second meeting of the four clubs of eleven-year-old boys who had volunteered, Ralph, who had drawn the role of democratic leader in the first time period, behaved in a way that was quite different from the other democratic-leader roles as we had defined them. He was obviously getting quite a different effect in terms of responses of the children. Kurt's observation of this, as he stood behind the burlap wall and operated the movie camera, led to an excited gleam in his eye as he perceived a basic genotypic difference between the democratic pattern and what we labeled the laissez-faire pattern of leadership. So instead of correcting Ralph's style we moved it more toward a pure case of laissez-faire pattern and planned for other leaders to use the same role to get a more complete analysis of the dynamics of the difference. This shift is a good example of Kurt's creativity."

Lippitt and White, working with small groups of Iowa City boys in 1938, sought to answer such questions as: What is the nature of democratic leadership? Can democracy be as efficient as a more authoritarian type of political organization? The primary objective, however, was to find out to what extent and in what ways the behavior of leaders shapes group behavior. To do this, two types of "leadership style" were considered: In the first style, the leader would automatically tell the group what to do and how to do it, would dominate the group, and would make all judgments as to whether progress was being attained. In sum, the experimenters set up the social atmosphere of the authoritarian leader. In the second style, goals and means for reaching them were left to the group to

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determine democratically. In both groups, the leader's relation to the members was held as constant as possible—friendly, but not particularly warm.

As Lippitt and White described it in their book-length report on the investigation:  

"A small number of eleven-year-old children met after school to make masks and carry on other activities. They were divided into two groups of five each. They were led by the same person (Lippitt) and met eleven times, but with one batch he played a 'democratic' role and created a democratic atmosphere and with the other he played an 'autocratic' role. Five observers took continuous notes on the behavior of the leader and the children."

According to Lippitt, the data showed that the authoritarian leader usually initiated activity with an order, often disrupting ongoing activity by an order which started things off in a new direction not spontaneously chosen, and fairly frequently criticized the work. The experimenters reported that though "the groups behaved similarly at the outset, they rapidly became different, so that in the later meetings the contrast was striking. In brief, there was far more quarreling and hostility in the autocratically led group, and far more friendliness and group spirit in the one democratically led. The children in the autocratic group picked on scapegoats and showed other behavior that seemed too similar to certain contemporary dictatorships to be mere coincidence."

From this initial experiment, the differences seemed sufficiently striking to warrant a more exact and more detailed investigation. The following year, therefore, a second series of experiments was undertaken. This time, more groups were used; they were composed only of boys; and careful controls over membership and activity were exercised to make the clusters more comparable. It was also decided to add a third variation of "laissez-faire" adult behavior. This better-controlled experiment produced about six times as much evidence as the first. The study took into consideration the basic factor of child personality, and each child had the experience of both an autocratic and a democratic type of leadership. The

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expanded experimental design also brought information on other matters—particularly on the characteristics of the transition periods.

Many of the findings of this study were striking. For example, in the autocratic atmosphere the boys were much more likely to lose initiative, to be restlessly discontented, to become aggressive and fight with each other, to damage play materials, and to function as individuals on their own with no concern for group goals or the interests of other members. In the laissez-faire atmosphere, there was much less work-centered behavior and discussion than under either of the other two varieties of leadership. Some boys who had been transferred to the laissez-faire from the authoritarian group became frightened and disturbed. Preference for democratic leadership was clearly expressed by all but one of the twenty boys in the four groups.

The autocratic setup created much discontent that did not appear directly but became noticeable in other ways. For example, the only four boys who dropped out did so during the autocratic leadership periods; more discontent was expressed during these periods although behavior stayed submissive. Autocratic leadership induced more demand for attention and more destruction of personal work materials and it suppressed individual originality. The propensity toward scapegoating became more noticeable.

Scapegoating was also in evidence under the laissez-faire conditions. The researchers attributed it to frustration brought on by too little leadership and to a feeling that there ought to be ground rules. The result was: vague feelings of inadequacy which somehow were relieved by ridicule of the less competent or less liked members of the group.

The experiments made evident a direct relation between group atmosphere and tension levels in the individual members of the group, and showed how the social atmosphere could affect their sense of interdependence and interaction.

To Lewin the results of the study were a source of real satisfaction, for they substantiated his own deeply felt belief in the superiority of the democratic system. “On the whole,” he later wrote of the Lippitt-White results, “I think that there is ample proof that the
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difference in behavior in autocratic and democratic situations is not
a result of differences in the individuals. There have been few experi-
ences for me as impressive as seeing the expression on children’s
faces during the first day under an autocratic leader. The group that
had formerly been friendly, open, cooperative, and full of life,
became within a short half-hour a rather apathetic-looking gather-
ing without initiative. The change from autocracy to democracy
seemed to take somewhat more time than that from democracy to
autocracy. Autocracy is imposed on the individual. Democracy he
has to learn.”

To Robert R. Sears, who headed the Child Welfare Research
Station during a part of Lewin’s stay, there was more than a little
reaction formation in Lewin’s interest in democracy. “The auto-
cratic way he insisted on democracy was a little spectacular,” Sears
has observed. “There was nothing to criticize—but one could not
help noticing the fire and the emphasis.”

Alex Bavelas, who came to Iowa as the Lippitt-White study was
being completed, suggested that people could be trained easily
enough to be quite democratic, even though they were autocratic
on their jobs, and that their behavior could be reshaped by using a
number of different methods. Lewin asked him, “How would you
do it?” Bavelas replied that he was not sure how, but that he was
certain it could be done. Lewin repeated, “How would you do it?”
Reluctantly, Bavelas sketched out some possibilities, and Lewin said,
“Fine. Suppose you try them out.” Ultimately, the ideas sketched
by Bavelas became the basis for an extension of the autocracy-
democracy studies to the field of industrial relations.

The Lippitt-White studies provide a representative model of how
students and faculty teamed up to carry out Lewin’s experimental
designs. A number of colleagues assisted Lippitt and White, serving
as observers, helping to analyze data, and acting as leaders in the
various experiments. The inquiry was a cooperative product, an-
other kind of Iowa Quasselsstrippe. It indicated, too, Lewin’s increas-
ing concern with what was going on in the world around him, particu-
larly in what happens to people under democratic and non-
democratic conditions. The Lippitt-White studies were steps to-
ward what came to be called "action-research"—the experimental use of social sciences to advance the democratic process.

Beatrice Wright says that "experiments like the frustration and the autocracy-democracy research take a good deal of time. It is much easier to run rats in mazes or to administer paper-and-pencil questionnaires in order to get large samples of data in short order. American psychologists in universities are too pressed to publish or perish, to get results quickly. Lewin's basis for tackling problems was always because they were significant and could be approached in conceptually meaningful terms. He was not constrained by criteria of speed, quantity, or statistical and experimental precision."

She adds that "Lewin's oft-quoted saying, 'There is nothing as practical as a good theory,' has sometimes been misinterpreted and used to discredit research that does not follow a precisely formulated theory or that is practically oriented. To be sure, theory was always an intrinsic part of Lewin's search for understanding, but the theory often evolved and became refined as the data unfolded, rather than being systematically detailed in advance. Lewin was led by both data and theory, each feeding the other, each guiding the research process. As for practically oriented research, Lewin's concern with social issues led him to value knowledge that could be applied to the social problems of the day. Research could be directed toward practical issues so long as it had the theory to guide it through all its stages. Indeed, if the theory were good, there would be nothing more practical."

A third crucial experiment carried out by the Lewin group—the so-called "Food Habits Study"—came about as a result of America's entry into World War II and of the friendship that had developed between Lewin and anthropologist Margaret Mead.

When the United States became involved in World War II, Margaret Mead was asked by M. L. Wilson, then Director of Extension in the U. S. Department of Agriculture, to serve as secretary for the Committee on Food Habits of the National Research Council. Wilson was the coordinator of the entire Federal Nutrition Program and had long dreamed of applying social science to problems of social change. The exigencies created by subsequent wartime...
food rationing provided the possibility of making his dream come true, and he asked anthropologists, psychologists, and sociologists to work with him on the Committee on Food Habits. The invitation to Margaret Mead to serve as secretary was part of the working out of his idea—and it would lead, through her, to Lewin.

It was on this basis, recounts Miss Mead, and in the knowledge that if social scientists were to participate in the coming war effort it was necessary to do a little field work in Washington, that she accepted the appointment. Characteristically, she doesn't remember whose idea it was which resulted in the eventual cooperation between the nutrition program in Washington and Kurt's graduate students at the University of Iowa.

Wilson was enthusiastic about Lewin. The two men worked out a design for a series of various kinds of studies which were relevant to the problems facing the Committee on Food Habits and which Lewin would conduct.

"The years in which I worked most intensively with Kurt were among his last at the University of Iowa," Mead relates. "Our committee had been requested to study and advise governmental agencies how to alter habits and tastes so that they would embody the findings of the new science of nutrition and also, during the wartime emergency, maintain the health of the American people, in spite of shortages and necessary shifts in types of food. As anthropologists, we came to the conclusion that our first task was to find out what American food habits were, what was the cultural setting within which different groups of Americans—those of foreign stock, those from different parts of the country—selected, prepared, ate, and enjoyed foods that kept them well or indifferently nourished. However, as a psychologist, Kurt's imagination turned first to experiment. This contrast was one which he and I kept constantly in play.

"Lewin set up a laboratory to work on the best psychological approaches to change, with food habits as the setting for the research, but his real interest, of course, was far wider even than how the people of the United States, or of the world for which we were also trying to plan, could learn to eat wisely and well.

"It was a lively group who always met my plane those days in
Iowa City, and if I come down at any prairie airport at sunset I can still recapture the sense of excitement and freedom, as I was greeted by a group of students whose personalities had been liberated by the atmosphere in which Kurt worked.

"I had to state our cultural hypotheses in forms which were intelligible to Kurt and his research group, who were oversensitive to individual differences and still skeptical about cultural differences. We wrestled far into the night over cultural formulations which would be derived from a study of New England and the Midwest: Specific formulations were then tried out in versions of the Bavelas test: 'What is a good meal for a boy to eat?' and 'Who would praise him for it?' From open-ended tests of this sort—psychological ones related to carefully constructed cultural hypotheses—we obtained new information about customs, finer differentiations of the maternal and paternal moral roles in the local Iowa version of American culture, and concrete details showing that Father presided over meat and butter, Mother over green vegetables and fruit juices, while desserts and soft drinks were wholly delightful and approved by no parent at all."

During the course of these studies, Miss Mead recalls, the concept later known as "group decision" was developed. Incongruous as it might seem that so significant a process should originate in a set of experiments on how housewives could learn to eat and serve so-called "variety meats," this was precisely where it began. Another set of studies had revealed that, though women claimed that their choice of meat to serve their families was imposed on them by their husbands, this actually was not the case. Indeed, it had been shown that the husbands had to eat what their wives themselves liked. All that would be necessary, therefore, to promote wider use of variety meats was to convince the housewives that they liked to eat them.

Other studies were conducted with carefully constructed groups of housewives or fraternity students on the use of such food items as whole-wheat bread or turnips. Miss Mead remembers the ill-fated experiment in which she was brought in as the "prestige expert from Washington to express publicly my high approval of turnips—which had no effect at all." But from these studies the experimenters
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learned that groups of people "can do a thing better when they themselves decide upon it, and also how they themselves can elect to reduce the gap between their attitudes and actions."

Margaret Mead's visits are remembered vividly by those who were at Iowa during the war period. "She and Kurt were fabulous together," remembers Sears. "Both could talk a mile or two a minute. When they sat down together, she would look worshipfully and silently at Kurt, and after a minute something he said would set her off, and he would start stuttering, 'but—but—but—' She would talk at him, and someone else would try to slow it down and say, 'Let's go after this—' They would just go at things and finally come out with some agreement."