
The Legacy of Solomon Asch

Essays in Cognition and Social Psychology

Edited by

IRVIN ROCK



Psychology Press

**THE LEGACY OF
SOLOMON ASCH:**
**Essays in Cognition and
Social Psychology**



Solomon E. Asch

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*Essays in Cognition and
Social Psychology*

Edited by

IRVIN ROCK

University of California, Berkeley

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Preface

This volume, a tribute to Solomon Asch, reflects the many areas of psychology to which he has made fundamental contributions: to cognition, perception, social psychology, and personality theory. His contributions also reflect a deep interest in theoretical psychology, notable for his extension of Gestalt psychology to topics beyond those dealt with by the founding fathers. Thus he stands as one of the few generalists of this century. This volume is divided into sections that correspond to these diverse interests. A unifying thread running through all of Asch's writings is his abiding humanistic concerns. These come together in a reiterated theme: the belief in the ultimate rationality of human conduct.

In varying ways, the list of contributors reflects Asch's interests and his influence, as well as his institutional connections. Some were his graduate students and research assistants at the New School for Social Research and at Rutgers University. Others were his faculty colleagues at the New School, Swarthmore College, Rutgers, and Pennsylvania Universities. However, quite a few of those whose essays appear in this volume were not directly his students or departmental colleagues, but are themselves important psychologists who have been deeply influenced by his ideas, research, and style of thinking.

The first chapter in this volume is a biography of Asch, tracing his career as an investigator. Therefore not much need be said here by way of preface. However, I do want to mention two points about Asch that distinguish him from most of his contemporaries, including many outstanding psychologists. There is, first, the point already made, the breadth of his interests. Then, there is the interesting fact that Asch's list of publications is unusually short (see pages 293–295). But what a list it is! Virtually every paper, to say nothing of his book, *Social Psychology*, is now a classic, a landmark contribution, constituting a paradigm that has given

birth to many replications and variations that have since been published. If others have emulated Asch, it is not because his work has been facile or fashionable—far from it—but because it has been penetrating and provocative.

Recently, Asch's *Social Psychology* has been reissued, unrevised, with a foreword expressing his thoughts about the book and about developments in psychology since its publication almost four decades ago. It is hoped that the reappearance of this classic, long out of print, will invite newer generations to study it, and that, supplemented by this volume of essays, it will serve to inspire us all and to perpetuate the lines of thought initiated by this exemplary man.

We thus present this volume to our friend, colleague, and mentor, with affection and admiration.

Irvin Rock

Berkeley, California



BIOGRAPHY

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1

On Solomon Asch

John Ceraso
Rutgers University

Irvin Rock
University of California, Berkeley

Howard Gruber
Teachers College, Columbia University

Solomon Eliot Asch, whom his friends call Shlaym, was born in Warsaw, Poland in 1907, but grew up in Lowicz, a little town not far from Warsaw:

A small religious environment where the relation of people to the forces around them was very near and strong. In that setting man is very important, not just to himself, he's important in the scheme of things, and this feeds an interest in human nature.

I was brought up at a time of great anxieties, big fears, great dangers. But I remember a little incident of another kind when I was a child. I must have been about seven. The war [WWI] had just started; it was Passover evening and there was the first Seder. Everything was prepared; it was a glowing ceremony, and we children were up late for the first time. Then I saw my grandmother fill a cup of wine for each of us including the children; and in addition, another cup. Then I saw a chair in which nobody sat. I was sitting next to an uncle of mine and I asked what this meant. He said that the prophet Elijah comes into every Jewish home on Passover. That is why there is a chair prepared for him, and at the proper moment in the ceremony the door is opened to admit him and that he takes a sip of the cup of wine meant for him.

I was completely fascinated and astounded that the prophet Elijah would in one night stop at all the Jewish homes in the world. I said to my uncle, "will he really take a sip?" and he said, "oh yes, you just watch when the time comes, watch the cup."—it was filled to the brim—"and you'll see that it goes down." And when the moment came, my eyes were glued to the Prophet's cup; I looked and looked and then it seemed to me as if perhaps it did go down a little! Well, except for a few details, that is just about the story of an experiment I was to do years later as part of the group pressure studies.

In that variation, as in others, there was a standard line and three comparison

lines. The task was to choose one of three lines equal to the standard. Is this clear? One of the three lines was markedly longer—or shorter—than the standard; no one chose it. The other two lines were equal to the standard and to one another; thus there were two correct alternatives. The majority that preceded the critical subject was always correct, always choosing an equal line. In addition, the majority was always unanimous: it always chose the same equal line, but shied away from the other. In short, the majority was correct, unanimous *and* one-sided.

Under these conditions ninety per cent of the minority subjects went with the majority, shunning the other correct alternative. This was by far the strongest pro-majority effect I obtained. However, the significance of this effect was not the same as in the main body of the study: the effect was not mainly about independence. Here the relevant question shifts: why did these minority subjects stay so close to their majorities? The answer is hardly in doubt. The minority noticed the features of the situation, and in particular wondered about the unchosen and equal line. They reported that the rejected, equal line was ‘almost’ but ‘not quite’ equal to the standard. The procedure created a doubt that was decisive. In this case there *was* safety in numbers. No such doubt attached to the chosen line.

Don’t ask whether what happened to me at the age of seven was responsible for an experiment that came forty years later—I don’t know. When I thought or talked about it, the Passover incident would come back to me. As far as I can remember, the thought wasn’t there when I planned it. Still I came to think of it as my ‘Passover’ experiment’ (Gruber, 1971).

Along with a great many others, Asch’s family migrated to the United States in 1920. They lived on the Lower East Side of New York, then a haven for many immigrants—Jews, Italians, Irish.

His wife, Florence, tells what it was like for him to come to a new country:

A naturally reserved, very shy boy of thirteen (he once said, “it was easier for me not to breathe than not to be shy”) and *without* language! Shlaym learned English by reading Dickens. He was put into the 6th grade of P.S. 147, the neighborhood public school. His most vivid memory of that early period was a complete inability to comprehend what was said. Slowly he began to catch on, and 1½, or 2 years later he found himself in Townsend Harris High School (Asch, F., 1989).

That school was attached to the City College of New York and admission was selective. It is remarkable that when Asch was at Rutgers-Newark, Gruber, Lehrman, and Rock, three other members of the Psychology Department, had also attended this small elite high school.

After Townsend Harris, Shlaym went to City College where he majored in both literature and science, earning a Bachelor of Science in 1928, age 21.

Toward the end of my undergraduate days, I heard that there was a science called psychology, and I assumed—wrongly—that its concerns coincided with mine. So you might almost say that I came into psychology by mistake. I had formed my

impression of what psychology might be from reading William James and a philosopher here and there—Santayana, Royce (Gruber, 1971).

In spite of the gap between his own concerns about human nature and the kind of psychology he was exposed to in his first courses, Asch went on to graduate studies at Columbia University. While he did not work much in social psychology at Columbia, he was attracted to anthropology, and attended seminars with Ruth Benedict and Franz Boas. Later, this led to a summer fellowship arranged by Gardner and Lois Murphy, with the help of Boas and Benedict. It permitted the Aschs to spend a summer in observations of Hopi children. The aim was to explore how the children became members of their culture; how they became “Hopified.” Based on this experience he wrote a paper, “Personality development of Hopi children” (Asch, 1932a). It was unpublished, but was cited briefly by Klineberg (1940), and at some length by Murphy, Murphy, and Newcomb (1937). Among the anecdotes cited is one he used later in his teaching, although his students were hardly aware that Asch had been the observer:

The teacher, a Mid-Westerner who was trying to inculcate American ways in the Hopi, sent some children to the blackboard to do an arithmetic problem, asking them to face the class as soon as they were done. Instead:

The quickest children, when they were through, waited and looked about inconspicuously to their right and left, and when all were ready, they all turned around together. Needless to say, the teacher had to abandon this practice. (Asch, 1932a, cited in Murphy et al., 1937).

His master’s thesis was done under the supervision of Woodworth. The research (Asch, 1929) was a dry statistical analysis of data provided by Woodworth of the test scores of 200 children (although Asch still believes there was an interesting idea in it). Except for a certain careful way of presenting things, one does not, strain as one may, hear Asch speaking in his own voice. There are a few sentence order inversions and other oddities that remind us of his European origins. This and the dryness of style are in sharp contrast to his later masterful and eloquent prose.

Asch was married to Florence Miller in 1930, and their son, Peter (now a Professor of Economics at Rutgers University), was born in 1937. The unity and steadfastness of his intellectual life are matched by the steady quality of his long marriage to Florence. Anyone who has seen them together knows what an easy, good-humored rapport there is in that household.

Florence Asch (1989) tells of their first meeting:

Where did we meet? In a library of course—where else? On East Broadway on the famous Lower East Side (where we lived a few blocks away from each other—but wrote each other constantly) the home of the Jewish intelligentsia, and working class. What a wonderful library that was. I haven’t seen such a beloved library

before or since—including the Bodleian. I can still remember the way the sun shone thru the windows—and its special smell. The books were old and well-thumbed. When new books arrived, not often, they became old in two weeks—everybody scrambled for them. On Friday nights after the library closed (at 9 P.M.) everybody went walking on East Broadway. There was loud talk and much argument. Two favorite topics: “What is the meaning of life?”, “Is there a God.” The first time we met in the library (1926), Shlaym asked to walk me home. He told me years later that he never knew how he got the courage.

Asch’s doctoral dissertation (Asch, 1932b) was on a problem that was given to him, as was commoner then than now, by his supervisor, H. E. Garrett, who: “wanted me to find out whether all learning curves had the same form. You can see the Middle Ages from which I date, so I don’t like to think about that study at all.” A little quaintly, the title page of the published version identifies him as “Tutor, Department of Philosophy, Brooklyn College.”

Something important happened to Asch at Columbia. He tells about this in describing an episode that will probably sound familiar to every experimental psychologist.

When I was a graduate student at Columbia, maybe in my second or third year, something happened to me suddenly as I was sitting in the psychology reading room reading a paper by Thorndike on the law of effect. That law was a big thing in those days. Much revolved around it in that peculiar world. And then, for the first time, I had what seemed like an idea. I was quite shocked, because I thought of myself as one who studies what other people say and think. I had no clear notion I would ever do anything of the sort that these important people were doing and though I was a shy youth, I immediately rushed down to the Department Chairman and talked to him about the problem. I didn’t even give myself a chance to think about it, and told him I would like to work on it.

Now the problem was a curious one. I was reading an experiment in which Thorndike had people look at lines of different lengths—having them judge the lengths, but he didn’t give them information about their accuracy. Thorndike was trying to show that without such information, they won’t improve their judgments. And, of course, information to Thorndike meant reward. If the subject said “two,” and you said “That’s right,” you were rewarding him. And I said to myself: But if the law of effect is right it should be possible for me to produce wrong judgments by following the law of effect. I’m going to show a person a set of lines in random order, and just ask him or her to say this is 1, the shortest line, that is line number 2, etc. Every time he gives a judgment I’ll tell him what the correct judgment is. But I’ll introduce one twist: in the middle of the set, say at lines 4 and 5, whenever he says 4, I’ll say 5, and whenever he says 5, correctly, I’ll say 4. Years later, I found a notebook with ideas, ideas about experiments and some questions, that I had kept while at Columbia. This was after I started the group pressure studies. I wasn’t particularly close to social psychology at Columbia, but there I found the plan for the group pressure study. I had completely forgotten it. When I read the notebook it was entirely new to me. (Gruber, 1971).

For Asch, the group pressure study was indeed a test of the law of effect, since the group is administering rewards and punishments which, according to the law of effect, should change the subjects' judgments. There is a quasi-religious feeling in Asch's objection to the arbitrariness of the law of effect. As he put it at one point, the laws of psychology must not be "just concocted by God."

Unquestionably, Asch's encounter with Gestalt psychology was the intellectual event of his life. He had some knowledge of it during his graduate student days. Gardner Murphy (1930), then a young faculty member at Columbia, gave *Gestalttheorie* a fairly full and very sympathetic treatment in his *Historical Introduction to Modern Psychology*. But it was not until Wertheimer came to the United States that Asch's encounter with Gestalt thinking really took hold. He recalled: "When I read in the New York Times one day that Wertheimer was coming to the New School for Social Research (later also known as the University in Exile) as a refugee, I said to myself that I must see him." (Gruber, 1971).

Note that Gestalt psychology did not just happen to Asch, he sought it out. By the time he met Wertheimer he had completed his formal training, so he never actually studied with him, but did get to know him well. It was not only the technical side of Gestalt psychology that drew him, but:

Wertheimer's inner qualities, the way he looked at psychological questions. They were for him more than simply technical questions that we had to study. He had a truly aesthetic approach. When he spoke of certain ways of thinking as "ugly," he meant it. He represented to me a kind of ideal of what a psychologist should be. For the first time I was meeting a man whose range of interest and whose concern with human questions was what psychology needed. It was exactly the dimension I had not encountered in anyone before, or, I might add, since. (Gruber, 1971)

It is true, as we have seen, that Asch had certain developed interests antedating this encounter: his youthful and abiding interest in human nature, his immersion, willy nilly, in research on learning, and his concern for problems of meaning and truth. But all these interests were assimilated into the context of Gestalt theory, and thereby transformed.

During the early 1940s, while at Brooklyn College (where he began his teaching career), he was editing the manuscript of Wertheimer's *Productive Thinking* (published in 1937). Asch used the unpublished work as the basis for his course on the psychology of thinking. His personal relationship with Max Wertheimer lasted until the latter's death in 1943. He then replaced his mentor as chairman of the psychology department at the New School.

At Brooklyn College Asch had a powerful impact on the lives of a number of students, among them Howard Gruber and Dorothy Dinnerstein; both later joined him to form the Institute for Cognitive Studies at Rutgers. He collaborated with colleagues Max Hertzman and Helen Block Lewis on studies of stereotyping and halo effects in social judgments. Dinnerstein and Gruber worked with Asch and

Witkin on the studies of the perception of the upright and discovered that performance on that task was related to gender and personality. Dinnerstein also worked with Asch on his *Social Psychology*, and, at Swarthmore, on the group pressure studies.

One of us (Gruber) reports his early recollections of Asch:

My very first class in psychology was a lecture, at Brooklyn College, by Shlaym, replacing the regular teacher, Witkin, who was absent that day. It must have been in September, 1939. Shlaym talked about the Lewin, Lippit, and White experiments on experimental social climates. I was enthralled. So from the very first day, the pertinence of scientific psychology to social issues was a given.

Later, I took a course on the psychology of thinking with Shlaym. We went over Wertheimer's *Productive Thinking*, working from the manuscript that Shlaym was editing. I was often the one who went to the blackboard and explained how I had solved a geometry problem. Wertheimer's book became for me the standard to strive for, and he and Asch have always been looking over my shoulder during my work on thinking.

Shlaym was in Ithaca for a time when I was a graduate student at Cornell. I remember a conversation we had about materialism while taking a walk. I used the old argument, if I kick a stone I feel it. By the consequences of our actions we know the world, and that is its reality; something like that. Shlaym replied in his super-dignified way—that the question was too important for such an easy answer. I was impressed, and since then have always thought of Shlaym as the person who directed me toward the importance of deepening an inquiry.

Asch was beginning his group pressure work just as I left for the army in January or February of 1943. The word reached me from friends: "people stick to their guns!" It was electrifying. Then he moved from Brooklyn College and started finding that the number of "yielders"—even in this perceptually highly structured situation—was disappointingly large. We have all had to learn to swallow that result, along with the lessons of the Nazi successes, and with the findings of Zimbardo and Milgram telling us that conformity is international.

I regard my shadow box research (see Chapter 9 in this volume) as a part of that story, an attempt to study the conditions under which people can synthesize different perspectives and thereby transcend the limitations of a single point of view. It is not about conformity or nonconformity, but about some aspects of the search for truth, and that is a preoccupation that goes back to my early contacts with Asch.

Another of us (Rock) met Asch a few years later at the New School for Social Research and has this to say:

I first met Shlaym in 1948. My teacher, Martin Scheerer, introduced us. He was sitting at the front desk of an empty classroom at the New School doing some writing. In those days the Psychology Department had two rooms which served as secretarial office, faculty office, seminar room, and laboratory, and these rooms were shared by faculty, secretary, and students. No one could possibly think or write there, and that was why Shlaym was in the empty classroom. But he did not at

all mind, nor did he expect more in the way of *facilities*. The image I have retained of him working in that classroom fits perfectly with the point Lee Ross makes in this volume where he contrasts the style of Shlaym's *Social Psychology* with the merchandising aspects of many contemporary textbooks on the subject (see Chapter 5, pp. 93–94). Nothing I learned about Shlaym thereafter necessitated any change in this image of his Spartan devotion to the world of ideas.

To explain what Shlaym has meant to me I have to tell that, until graduate school, I had a poor academic and intellectual record. I was a poor speller, poor memorizer, poor reader, and a slow thinker. But in graduate school I found out that thinking, particularly independent thinking, was important, and, much to my surprise, my teachers seemed to find that I had some ability in this direction. As to Shlaym, when I had an idea, his eyes lit up and he let me know he valued it. When I told him in 1955–1956 about my experiments showing no benefit of repetition in forming associations, his support—along with that of only very few other people—sustained me during the period when this work began to draw the fire of all the “big guns” in psychology. In 1963 he invited me to teach a class in learning and memory at Swarthmore and did me the great honor of attending it regularly. It is hard to overestimate just how important it was to a young investigator to merit the praise of a man of Shlaym's stature.

There is another aspect of my relationship with Shlaym that has meant much to me. Despite his well known devotion to and respect for Gestalt psychology and his leadership role in its extension to social psychology and its dissemination in America, he never expressed the slightest annoyance or fault-finding when my research led me to question one of another of the Gestalt tenets. Not the slightest trace of dogmatism was ever in evidence. The message was implicit but it was clear: What mattered was “truth.”

In 1947 Asch joined the faculty of Swarthmore College, but retained his connection with the New School. At that time, Swarthmore had become the major home of Gestalt psychology in America, with the New School as a kind of annex. Mary Henle who had been at Bryn Mawr replaced Asch at the New School. The faculty at Swarthmore included Köhler, Prentice, and Wallach. Asch, Wallach, and occasionally even Köhler gave classes one night a week at the New School. Swarthmore emphasized undergraduate education and the students were quite gifted. Many distinguished psychologists received their undergraduate education there.

Another of us (Ceraso) tells of working with Asch at Swarthmore in the mid 50s.

Of all my recollections of Shlaym there is one which somehow comes to mind when I think of him. I had been a graduate student at the New School and Mary Henle recommended me to Asch who was looking for someone to assist him in his research. As his research assistant at Swarthmore I was often present when he would give a talk about the work we were doing. I noticed that very often, when someone asked a good question, he would ask them to repeat it, “So that I am sure I understand your question.” Now, what at first seemed odd to me was that the

question was invariably one which we had already spent many hours discussing. As any one who has worked with Asch knows, an important part of the job is to think along with him as he attempts to penetrate the complexities of a problem. What a wonderful experience that was for me! So, usually, we would know where the question came from and where it went. Why then did Shlaym treat it as new, as one he had never thought of before? Well, for one thing, by treating it as new he gave respect to both the questioner and the question. But, more important, I believe that Asch, in his Socratic way, doesn't think of a good question as new or old, answered or unanswered. He regards it as providing yet another opportunity to take a fresh look at a difficult problem, and a chance to see it in a new and deeper way.

At Swarthmore, Asch formed a strong relationship with Köhler. Köhler died in 1967 and Asch wrote the obituary which appeared in *The American Journal of Psychology*. What Asch wrote tells us as much about him and his values as it does about Köhler.

Those who met Köhler knew that they were in the presence of a remarkable human being. A tremendous part of what he communicated he did through the qualities of his person. His bearing conveyed a measured balance of vitality, intelligence, and feeling. There was an unsullied integrity about him; no gesture was incompatible with his overall values. His scientific individuality, the art of thinking and investigation that he exemplified, were rooted in the larger pattern of his character. With him science did not shrink the man. Scientific activity was for him part of the life of civilization, not its replacement. He could not tolerate injustice; the necessity to act in accordance with the requirements of the situation was strong in him, strong enough to prevail over a shyness and aversion to public activity. Köhler was one of the few academic persons in Germany who did not remain silent in public about Nazi excesses. One thinks of these as lofty qualities, and indeed the life of Köhler was one of high seriousness, but one must not omit his deep enjoyment of nature and persons and his constant play of keen humor. In some ways he exemplified a style of life and character that is rapidly receding into the past. A bold and incisive mind that helped bring psychology into the twentieth century, he retained a serene confidence in the validity of human striving and values. There are few in any generation of his stature. (Asch, 1968b)

Asch spent 19 years at Swarthmore, and left in 1966 to found (with John Ceraso, Dorothy Dinnerstein, Howard Gruber, and Irvin Rock) The Institute for Cognitive Studies at Rutgers University. In 1972, Asch went to the University of Pennsylvania as Professor of Psychology where he remained until he retired in 1979. He now lives in Princeton, New Jersey.

Asch's many honors include two Guggenheim fellowships, residences at the Institute for Advanced Study at Princeton, the Nicholas Murray Butler Award from Columbia University, the Distinguished Scientific Contribution Award of the American Psychological Association, and membership in the American Academy of Arts and Sciences.

In addition to his work in social psychology, Asch has made significant contributions to the study of perception, metaphor, learning and memory, and person perception. These works are unified by two related themes; a holistic approach to cognition, and an emphasis on the rationality of mind.

In the 1940s Asch and Witkin began their collaboration on the effect of the visual frame of reference on the perception of the upright, culminating in their four classic articles published in the *Journal of Experimental Psychology* in 1948. The series won an award, then given annually by the APA, for the best experiments of the year, quite an honor for Asch who had never published in the field of perception before, or since for that matter. While this research later came to be known as the rod-and frame effect (see the Chapters by Rock and by Ebenholtz in this volume) it actually encompassed more than just the effect of a tilted frame on a rod contained within it. Some of the experiments made use of a mirror to tilt the actual scene (a procedure originally used by Wertheimer [1912] who referred to the “righting” of the scene after a short period of inspection) and other experiments made use of tilted rooms. The immediate impetus for these experiments was a paper published by Gibson and Mowrer (1938) in which they maintained that gravity receptors were the major factors in determining what directions appear to us as vertical and horizontal in the world, Wertheimer’s mirror experiment to the contrary notwithstanding. But the Gestaltists had argued that objects are perceived with respect to how they relate to the visual frame of reference and Wertheimer’s demonstration with a mirror was certainly compelling phenomenological evidence for this belief. Duncker’s work on motion induced by a surrounding reference frame also supported this view.

Asch and Witkin (Asch & Witkin, 1948a, 1948b; Witkin & Asch, 1948a, 1948b) introduced an important variation; they included a rod within the scene with which to *measure* the direction that appeared upright. One might say that here was an interesting fusion of the experimental approach of American psychologists of Asch’s generation with his way of thinking about Gestalt psychology. Of course, H. A. Witkin was a major determinant of the course of this research, and perhaps with a similar mixture of influences. These studies revealed a powerful impact of the visual frame of reference on the phenomenal upright, a result that seriously challenged Gibson’s earlier claim. The 1948 papers are rich in facts and observations about how subjects deal with the conflicting information and make fascinating reading even 40 years later. Witkin and his collaborators continued the investigation with an emphasis on individual differences in field dependence that also became well known (see Witkin, Lewis, Hertzman, Machover, Meissner, & Wapner, 1954).

Asch’s influence has been most significant in the field of Social Psychology and that work is characterized, as is all of his work, by careful and elegant thinking, ingenuity in experimental design, and a concern with basic issues and assumptions. The focus of a number of his studies is the demonstration of the Gestalt principle that one cannot describe the result of a stimulus array as the

summation of the fixed properties of the elements which make up the array. For example, in the studies of the forming of impressions of persons (Asch, 1946), he showed that the order in which a list of traits was given could affect the resultant personality impression. Also, some traits seemed to be more central than others, so that substituting "warm" for "cold" would affect the overall impression and change the meaning of each of the individual traits. We have already seen how contextual determination was treated in his studies on the perception of the upright.

His concern with cognition and the rationality of cognitive processes is continuous with the Gestalt position on the veridicality of perception. The Gestaltists believed that the perceptual system is designed to yield an objective picture of the real world, and it does this by following certain principles of organization. It can happen that one may at times misperceive, but the misperception is accounted for by the same rules which apply to veridical perception; for example, Wertheimer's laws of grouping account for the articulation of the visual field into objects, but camouflage, which works by the same grouping principles, can also work to conceal objects.

The theme that the person actively constructs his world is also seen in the work on prestige suggestion (Asch, 1948). Does a person blindly give high value to a statement attributed to Jefferson, and low value to the same statement when attributed to Lenin? Asch showed that the situation is more complex than that. People will give different value to a statement when it is attributed to Jefferson than when it is attributed to Lenin because the *meaning* of the statement is different in the two situations. The meaning of an utterance is constructed in the context of what the person knows, or believes, to be the convictions of the person who produced it. In these days of schema and frame theories of comprehension this analysis would be readily accepted, but Asch's views were very provocative at the time they were presented, and had great influence.

Asch is perhaps most widely known for his pioneering work on independence and conformity (Asch, 1956). The issue is, "how does one understand the tendency of individuals to conform to the group?" The experimental paradigm he developed to study the question is, as Roger Brown put it, "an epistemological nightmare." The subject is confronted with a standard line and three variable lines, one equal to the standard and the other two obviously different in length. The subject hears the unanimous judgment of other subjects (three or more is all it takes) that one of the unequal lines is, in fact, equal to the standard. The group judgment contradicts what the subject sees clearly with his or her own eyes. Whether one yields or resists, the experience is powerfully distressing. Indeed, there is some evidence that those who resist are more affected than those who yield. Asch argues that the situation is disturbing because it brings into conflict two powerful forces by which we construct reality; our own subjective experience, and intersubjective agreement. The assumption that the world as we see it is the same world seen by others is brought into question. The study does

not tell why people conform or why they are independent, but, rather, puts the question in a much broader perspective; social behavior is seen as involving a coordination of one's own perspective with the perspective of others, and people act in what they consider to be a "mutually shared" field. It is the blatant disconfirmation of the assumption that we all share the same world which is so distressing. The procedure developed by Asch and the variations on it are endlessly fascinating and have influenced the work of many other psychologists.

The concern with objectivity took another turn with his work on metaphor (Asch, 1955, 1958). In this work Asch examined the proposition that metaphors are simply social conventions. That is, one learns to associate the word "cold" with a certain type of personality. He examined such sensory terms and their reference to personality in a number of languages (Old Testament Hebrew, Homeric Greek, Chinese, Thai, Malayalam, and Hausa). He found wide agreement between these languages in the assignment of sensory terms (hot or cold person, deep or shallow thinker) to psychological traits. Language and thought are not the result of rote associative connections, but reflect the attempt of the person to deal with the real properties of people and objects.

In the 1950s Asch returned to the topic of learning where, as we have seen, he had done his earliest research, and published a series of experimental and theoretical papers on that topic. The dominant position at that time was that learning could be described as the association of temporally contiguous events, and the events that were associated were stimuli and responses. Asch took issue with these assumptions. In contrast to the stimulus-response characterization of human learning Gestalt psychologists believed that perceptual and conceptual processes left behind a memory trace; an internal representation of the percept or the idea. Asch joined this issue thru the study of associative symmetry (Asch, 1968a; Asch & Ebenholtz, 1962a; Asch & Lindner, 1963).

If one describes a paired associate as a stimulus-response pair, then it does not make conceptual sense to say that a response can give rise to a stimulus. Nevertheless, backward associations do occur in human paired associate learning. S-R theorists dealt with this awkward fact by arguing that in learning an A-B pair, *two* S-R associations were formed; a forward association, where A was the stimulus and the production of B was the response, and a backward association, where B was the stimulus and the production of A the response. The evidence for this theory was that forward associations are stronger than backward associations. Asch and Ebenholtz presented evidence which suggested that there was only one, symmetrical association and that forward-backward differences could be accounted for by differences in item availability, a non-associative property of the traces themselves. It is interesting to note that their general position is now widely accepted. The work of Collins and Quillian (1972), and of Anderson and Bower (1973) has made current the idea of memory as an internal representation of the presented information and this concept is now dominant in the field. The idea of "activation" as a property of memory traces is also indispensable in

present thinking, and is quite similar to Asch and Ebenholtz's concept of trace availability.

A second theme in Asch's work on learning is the distinction between unitary and nonunitary associations (Asch, 1962, 1969; Asch, Ceraso, & Heimer (1960); Asch & Prentice, 1958). It is astonishing that this important distinction had been neglected for so long, particularly when one realizes that the founders of associationism, Locke, and especially Hartley, had specifically discussed the analogous distinction between simultaneous and successive associations (Herrnstein & Borning, 1966; pp. 348–355). Asch created a simple paradigm through which he demonstrated that simple properties, such as shape and color, would enter into association much more readily when they were parts of the same unit than when they were parts of different units. Ceraso's chapter in this volume reports work directly related to Asch's research. One senses that the web of issues surrounding the concept of the unit has finally become a "hot" topic in psychology. This is largely due to the recent work of Treisman (1986) that has provoked excitement about an issue which should have been dealt with long ago.

The third aspect of Asch's work on learning and memory deals with the concept of association itself. In a series of papers (Asch, 1964, 1968a; Asch & Ebenholtz, 1962b; Asch, Hay, & Mendoza, 1960) Asch has attempted to show that even when dealing with more traditional associative paradigms the concept of association encounters difficulties and complications.

The free recall of items from a serially presented list, for example, had been treated by postulating sequential associations between the list items which mediated their recall. Asch and Ebenholtz (1962b) presented evidence suggesting that, in fact, recall of material from a serially presented list occurs readily even when the conditions which foster interitem association are not present. In order to deal with the kinds of difficulties Asch's studies revealed, association theorists have employed concepts such as "association with position." But Asch has pointed out that these concepts themselves entail further problems. For example, the concept of "position" is itself relational, it does not refer to a particular position in space. One learns that an item is at the beginning, the middle, or the end of a series. Neither can one identify position temporally. For example, Asch, Hay, and Mendoza (1960) showed how the same temporal series would be learned differently when presented in different spatial patterns.

When one thinks of Asch, and a few others, attempting to develop a cognitive theory of learning at that time, in the face of massive opposition, the analogy to the group pressure studies becomes irresistible.

As we have seen, then, Asch is one of the few experimental psychologists who has contributed to the many fields into which psychology is now divided and who has also elaborated a comprehensive view of man; each study can be seen in its own right and also in relation to this more comprehensive view. The broadest statement of his position was given in his 1952 book, *Social Psychology*. The book reflects his belief that people, given a chance, will behave reasonably and

decently. His friends know how deeply Shlaym cares about social issues and the human condition and how his work flows from these concerns. Happily, a reprint of the book was made available by Oxford Press in 1987. Some sense of the aims and contents of the book can be gotten from the preface Asch wrote for the Oxford edition.

He describes the state of psychology at the time the book was written:

The dominant American direction was behaviorism; it rested largely on the findings and conclusions of Pavlovian conditioning and British Associationism, as filtered through the American milieu. The overarching concept was habit—it was concerned with how habits are formed and changed. Psychoanalysis served as a secondary but important adjunct. As applied to social psychology, it was about how persons deceive themselves (and others); in particular how persons and groups are misled by instinctual forces. Historical circumstances make for odd alignments, and this is what happened with the peculiar affiliation during the 1930's in America between the alien and mostly incompatible currents of behaviorism and psychoanalysis. Mainly they shared one affinity; both worked (although in distinctive ways) from the premise of human irrationality; both strove for a general psychology on that foundation. This notion was not altogether clear, but neither was it easy in the climate of the time to counter the premise of irrationality. People do go mad, and even when apparently sane they are capable of killing one another by the millions. Thus, despite many obscurities, these unlikely partners were made to mesh—conditioning and association on the one hand and psychoanalytic processes on the other—and the combination appeared acceptable to many.

Asch also pointed out that the legacy of World War I, the great depression, and the growing threat of World War II, all fed into a cynicism concerning human beings. He then described his intentions in writing the book:

It was about that time (in the 1930s and 40s) that I became somewhat acquainted with gestalt ideas and began to think of a work in social psychology. My own convictions were not notably more prescient than those of my contemporaries, yet I did persist in a few points. First, the work was to be about fundamental issues of human psychology: it was to clarify problems more than to provide solutions. My intention was to produce, in contrast to the prevalent non-cognitive versions, a phenomenological psychology in which social facts and processes held central place. The account of human experience would of necessity be cognitive, but the emotional dimensions of human existence were not to be slighted. Not to sound too grandiloquent, I aimed for a treatise on human nature, informed by recent gestalt strivings—a psychology with a human face. The foregoing aims of course presupposed the necessity to portray human beings as a whole, not as a collection of mechanisms or facts. The opening chapter of the book examined in a critical light what I called “doctrines of man,” or entrenched assumptions that were taken for granted and that few stopped to question. Among these themes was a systematic underestimation of human intellectual capacities and potentialities. It was not diffi-

cult to understand or even to sympathize somewhat with this position, but it was less easy to justify the glib ways in which it was adopted. Surely it is not the mission of psychologists to mouth the preconceptions of their day. The consequences of this theme, usually lamentable, spurred me to explore several related questions that lent themselves to concrete investigation. Ironically, many investigators were friendly to these efforts and tried to carry them forward, without however departing in the slightest from their irrationalistic starting point. As I was to discover, my medicine was evidently not sufficiently powerful. It did earn me though the suspicion in the eyes of some of my colleagues of being a "rationalist." My own position was far more modest, if not trite; I did hold that under certain conditions people are capable of acting reasonably.

Another problem that engaged my attention concerned the powerful assumption that human motives and actions are self-centered, that the ego is for each the center of the world. So unquestionable did this proposition seem that it virtually amounted to an axiom: social psychology was not only about individuals, but individualistic at the core. This belief found no place for the person as citizen, as the bearer of rights and duties, capable at times of public spirit.

In preparation for this volume some contributors sent along reminiscences of Asch and what he and his work meant to them. We have already incorporated some of this material, and though there is not enough space to include it all, we don't want to omit what Roger Brown, and Henry Gleitman gave us.

Roger Brown:

"When we examine the characteristics of instinct and habit we discover a curious thing about them: they are not *human*." That wonderful sentence telling social psychologists we had nothing to lose but our chains is from Solomon Asch's textbook. The book was published in 1952 and that was the year I first taught social psychology; by departmental decree, with little background, in a cold winter, at Harvard University. The only thing in my head was instincts and habits, then called learning theory, based on animal experiments, and so, the first time through, the social psychology I offered was a kind of Dollard and Miller (1950) liberalization of Clark Hull (1943). There were external stimuli, big "S's," and overt responses, Big "R's," and a lot of little "s's" and little "r's" desperately mediating between them and everybody was working to satisfy the hunger drive. That first time through students would scratch their heads and say: "There must be more to social psychology than this." "No, no," I assured them, "that's it, that's the lot."

"All societies of which we have knowledge possess some form of medicine and rules of hygiene. In all societies we find personal names, modes of greeting, hospitality, feasting, games, and athletic sports. . . . Facts of this order offer a threat to the belief that the invariant properties of men are to be found solely at the earliest stages of development. . . . (Asch, 1952, p.78)". Professor Asch was visiting at Harvard in the early 1950's when I was an instructor and I heard him give many talks and seminars. In true elementaristic fashion I brought the great experiments into my course one at a time over some years: group forces on the modification of judgments (conformity); structural factors in the understanding of

assertions (critique of the doctrine of suggestion); universal aspects of metaphor; person perception. At first each was unconnected with the serious business of instincts and habits, a “box” in a textbook, something too good to leave out but impossible to integrate with the drossy stuff around it.

How I loved teaching Solomon Asch’s experiments! How *have* I loved teaching them and writing about them for all these years. But it has to be done right. A flat statement of the outcomes gives neither understanding nor pleasure. You must always read again the original presentations so that you can preserve the tensions of the argument and the student can appreciate the beauty of the thinking.

His experiments did not stay in the boxes I put them in. They exerted *forces*. They transformed my course in social psychology and my thinking about social psychology, creating in me an appetite for what is universally and peculiarly human.

Henry Gleitman:

It was late at night, sometime in the 50s, as I was about to leave after a visit to the Asch’s. Florence had gone to bed an hour or so before, having previously plied Shlaym and me (mostly me) with a generous number of her magnificent Old Fashioneds. I had been arguing with Shlaym. I was always arguing with Shlaym, sometimes about Greek Tragedy, and sometimes about American Learning Theory. That particular night I had tried to convince him that one could make a case for Neal Miller’s attempts to interpret certain complex human phenomena in S-R terms. Just why Shlaym kept on listening, I’m not quite sure, even now. Perhaps he really wanted to find out what was going on in Yale just then (though I doubt it). Or perhaps he was just being kind to a brash young man (which is more likely). Or perhaps he regarded me as a traveller returning from a far-off land who brought back amusing tales of Anthropophagi and men whose heads do grow beneath their shoulders (which is even more likely). In any case, he listened to me gravely, and nodded, and then, just as I put on my coat and was about to leave, he smiled and asked: “Yes, Henry, but can a rat play Iago?”

What a puckish, devastating comment! At the most obvious level, it was a supreme—and oh so gentle—putdown. For of course Shlaym knew of my deep interest in acting and directing. And of course he knew that the one part I truly ached to play was Iago. (What actor doesn’t?)

I eventually realized that Shlaym’s sly question had a much deeper and less personal meaning as well. For what is it that a rat can’t possibly do, no matter how many rg’s we may choose to grant it? The answer is that it cannot lie or pretend. Like Iago. And if it can’t do that, it assuredly cannot take the further step of pretending to pretend. Like the actor who plays Iago. Or any actor on a stage.

I regard Shlaym as one of the deepest—perhaps *the* deepest psychologist I have ever met. As a young man I didn’t realize just how deep he was. I hope he’ll regard my comments about the theater [Chapter 8] as an indication that I finally understood his little joke.

We began this biography with Shlaym speaking about his childhood. It seems appropriate to end with his recent thoughts about psychology. This comes from the preface to the 1987 Oxford edition of his *Social Psychology*:

Today social psychology appears almost unrecognizably different from what existed in the 1950s when this book was written. The field has expanded enormously: it now resembles more an international combine than the corner grocery of the past. New topics have sprung up, old ones have vanished. More to the point, behaviorism as it existed has apparently lost its old force, and the emergence of gestalt views is almost universally acknowledged.

Why then am I not ready to beat the drums of victory, to proclaim that my hopes have been vindicated, and that a new day has dawned in the study of mankind? Why the sense of unfulfilled perspectives? Why do I sense, together with the current expansion, a shrinking of vision, an expansion of surface rather than depth, a failure of imagination? Have the changes that transpired in recent decades been more than skin-deep? Why the outcroppings of piecemeal ways of thinking during a supposedly gestalt revolution? Why are the stirring contributions so eerily rare as one leafs through volume after thick volume? Has there in fact been anything like a gestalt revolution in American social psychology? The evidence is, I think, not convincing. And is not the current cognitive psychology, despite the striking change of language it has introduced, perhaps too often a guise for a newly attired behaviorism, a species of the increasingly mentioned cognitive behaviorism? More important, why is not social psychology more exciting, more human? The reexamination of basic assumptions that was needed in the 1950s is, I believe equally necessary today. Busyness is no substitute for serious analysis.

It is not my intention to end on a negative note. Indeed I have never sided with those who held that social psychology is a marginal, inbetween discipline; to me it was and remains as ultimate as physics. Therefore I am hopeful of its future, even though that may require insights not yet on the horizon but struggling to come to the surface.

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