Introduction

The decades after the Second World War were an era of uncommon imaginativeness and insight in social psychology, which produced new ways of understanding the social nature of human behavior and transformed social-psychological inquiry into a rigorous intellectual and experimental discipline. Leon Festinger's work includes many landmarks in the history of this transformation and defines the broad contours of the field. Edward Jones, a statesman in social psychology working outside the Festingerian tradition, has articulated the common view: Festinger has been "the dominant figure in social psychology" since Kurt Lewin (Jones, 1985), and "whatever the future holds, the dissonance research 'movement' has been the most important development in social psychology to date" (Jones, 1976). Rarely has the growth of a scientific field been so entwined with the work of one individual.

Festinger pursued his scrutiny of human conduct in a variety of research programs which fundamentally transformed psychological thinking over a period of forty years. This collection encompasses Festinger's classic contributions of enduring influence in social psychology, as well as papers which mark important junctures in the development of his work. Because of the variety of the work, even within a particular period, the collection is not organized in strict chronological order. The thematic arrangement of the writings is more apt to bring forth, across the diversity of subject matters, the tightly and finely wrought mesh of problems and ideas, the new conception of social science inquiry, and the richly imaginative intellectual style, which contribute to the vast import and impact of Festinger's work.

The research in this volume transcends the traditional bounds of the discipline. General problems are pursued in a great variety of particular contexts, as Festinger constantly pushed back the frontiers of the field. In the following pages, one encounters many topics: maze running in rats; the voting behavior of Catholics and Jews in mixed groups; coalition

formation in competitive bargaining; the effects of unethical behavior on the people who engage in it; a mathematical model of decision-making; the meaning of minute eye-movements (as recorded by high-technology optical apparatus and computer) for a theory of the conscious experience of perception; the social-psychological implications of the stones and bones found at Near Eastern campsites some 18,000 years old; housing satisfaction at an MIT residential project; and the proselytizing behavior of a cultist group.

The writings in this volume also have permeated the general cultural and scientific sphere—far more than any other line of research in experimental social psychology. The work has been influential in literary theory of fiction; in ethnological studies of modern industry and of percussive noise in ritual; in demographic studies of fertility, marketing research, and philosophical works on justificationism and free will; in histories of ancient Rome, of the American involvement in Vietnam, of Madison's trade negotiations with France in 1811, and of China's cultural revolution; in studies of Karl Marx's social theories, discussions of Supreme Court decisions, economic theories of income redistribution, and the editorial columns of major newspapers.

Although Festinger's ideas eventually captured the educated imagination, many of them initially aroused intense controversy (e.g. Chapanis and Chapanis, 1964; Mowrer, 1963). If the texts now appear prescient, it is because they have come to shape the field. Originally, they oftentimes violated prevailing conventions of thought and technique with propositions such as the following: social influence could best be achieved by changing behavior, rather than attitudes; smaller, rather than larger, rewards or punishment were more effective in persuasion, contrary to common reinforcement principles; the greater the effort the higher the enjoyment of the activity; after a choice or commitment is made, it will typically trigger a reevaluation of the available alternatives; systematic principles of human cognition and behavior also could be derived from rat studies or historical data. The studies in this volume constantly shake old certainties and habits of thought, the many fixtures of the mind noticed only when one stumbles over them while following Festinger's line of argument. The writings arouse the reader from any "dogmatic slumber." Festinger's seemingly counterintuitive but ultimately persuasive propositions afford fresh insights into traditional problems. The insights frequently make our world look strange again, and restore our sense of wonderment, as the familiar reality is reconstructed from novel principles. Van Gogh, in bold strokes, forced us to look at the world in different ways, and led us to discern the flame within the tree. Festinger's work also casts habitual phenomena in a new light. The

penetrating originality of the work asserts itself throughout, and in rereading it one experiences anew, at many turns of the argument, the sense of the unexpected.

At the heart of Festinger's research programs there always are an important idea and a question, which are pursued in their full complexity. In the beginning there is, typically, a riddle, which maps domains of conceptual ignorance. The theory of cognitive dissonance evolved out of Festinger's puzzlement over the rumors that swept neighboring villages following a local earthquake in India. *The Human Legacy* begins with a set of important questions: What were the origins of human societies that today face so many problems? What were the beginnings of our present way of life? Throughout Festinger's work, there is a persistent refusal to understand the seemingly obvious, and a conviction that uncovering the question may indeed be harder than solving it. The opening of *The Human Legacy* (Chapter 18) expresses the spirit of the entire work: "Let us take a look at this curious animal, the modern human being, to ask if we really know much about him or are we simply accustomed to, and adapted to, his peculiarities." (p. IX) Festinger's writings expand at once both our knowledge and our ignorance.

In Festinger's work, questions trigger systematic inquiry and the answers that emerge rarely fail to intrigue in their own right and to pose new problems along the way. The theoretical paper on "Informal Social Communication" (Chapter 5) originates in an applied study of architectural and ecological factors affecting housing satisfaction in two new MIT housing projects (Festinger, Schachter, and Back, 1950). The study employed interviews, sociometric tests, and other standard measures. Festinger and his colleagues, however, became puzzled by a finding in one of the housing projects, which indicated a strong correlation between the degree of friendship in a group of residents and the homogeneity of opinions in the group. This finding, wholly incidental to the purpose of the investigation, converted a prosaic housing study into an initial exploration of social influence processes and led, eventually, to two major theories in social psychology, the theory on pressures toward uniformity in a group and the social comparison theory (Chapter 6).

In the pursuit of the problem, Festinger evolved a new way of theorizing and doing research on complex social phenomena. Kurt Lewin, Festinger's mentor, had emphasized that an understanding of causal relationships could be derived only from the psychological representation of reality in individual consciousness. Such understanding, Lewin argued, required consideration of the interrelatedness of the person and the environment, epitomized in the concept of the "life space." Lewin also developed dynamic concepts which led to important empirical work

on issues such as the psychological effects of task interruption, leadership climate, or level of aspiration. Seminal though it was, Lewin's field-theoretical approach remained largely a set of formal abstractions of considerable suggestive value.

Festinger transformed this metatheoretical view of psychology into an experimental approach with a unique combination of methodological rigor, creative power, and critical insight. Although there had been earlier experimental studies in social psychology, Festinger converted the experiment into a powerful scientific instrument with a central role in the search for knowledge. His approach became the major paradigm of the field. In Festinger's use, the psychological experiment was designed not only for testing or verification, it was also a method of discovery. It was science through thinking and imagining, not just through the collection of data. The experiment served as a means of understanding and clarifying conceptual issues and scrutinizing reality.

The experiment thus required the cultivation, in the laboratory, of important real-life situations linked to theory. The studies in this volume all attest to Festinger's talent in bringing "powerful social situations that made big differences" into the laboratory. Experimentation was an art form that required considerable stagecraft. There are many ingenious sets and scripts in the following pages—from the study of "overheard" persuasive communications (Chapter 23) to the central principle of dissonance studies.

Dissonance experiments required a fine balance of experimental influence hardly discernible behind deceptively simple procedures. The experimenter must apply the kinds of pressure that induce participants in the studies to behave in ways they would not ordinarily do and yet to believe they do so of their own volition. A little less pressure, and people might not oblige; a little more, and they might feel obliged, and experience no dissonance. The procedural ingenuity and the conceptual richness of Festinger's experiments have remained unmatched in the history of social psychology. His writings are both the manifesto of experimental social psychology and its most distinguished case-book. The studies have the sustaining force of demonstration: Experimentation in the laboratory can reveal significant aspects of human behavior and can yield new insights into important processes, by systematically interfering with them or manipulating them.

Festinger's pursuit of the problem in its full complexity and the consequent fecundity of his experimental approach stand out against much work that preceded and followed. Scientific psychology has often aimed for conceptual and methodological simplification to meet standards of experimental rigor. Behaviorism, which dominated psychology from the 1930s to the 1950s, insisted that psychology examine only observable

phenomena and study the associations between measurable stimuli and overt behavioral responses. This positivistic approach excluded from the purview of psychology any consideration of "mentalistic" concepts—cognitive or affective processes not readily in sight. Behaviorist research thus focused on the effects of reinforcements, which afforded precise experimental manipulations and measurements. The stimulus-response language considerably limited the usefulness of the experimental framework for the description of complex human conduct. From the early studies on level of aspiration and the experiment on differential appetite in the rat, Festinger's work reintroduced the concern with inner experience and with motivational and cognitive dynamics into social psychology. The internal events are explored, not phenomenologically, but through systematic experimentation. The individual is not viewed as a passive processor of stimuli or of information. Needs and aspirations, thinking and behavior of necessity are intertwined; they may, however, not be coordinated to each other, leading to states of tension and conflict. Motivational forces are treated as an integral part of the process: affect does not simply overwhelm or disrupt the "ordinary" course of behavior or thinking, but organizes and redirects behavioral dynamics in predictable ways. The conceptual complexity of the approach also is reflected experimentally. In all the studies, the inner experiences of cognition and affect are linked to action, and the claims of the work are invariably staked on actual behavioral outcomes. Participants in Festinger's studies *are* involved. The arousal of cognitive dissonance, in the experiments, is linked to a behavioral commitment, which carries significant pleasant or unpleasant implications for the individual. More dramatically, the cultists in *When Prophecy Fails* (Chapter 13) gave up their jobs and possessions for a central belief, shortly before it was incontrovertibly discredited.

The insistence on a comprehensive understanding of human conduct is exemplified in the many uses of imprecision in the work. On the one hand, the work is characterized by impressive precision. In the early paper offering a mathematical model of decision-making; in the formal, hypothetico-deductive presentation of the theories of informal social communication and of social comparison processes, reminiscent of the rigorous formulations of behavioristic frameworks; in Festinger's important statistical and methodological contributions, which are not included in this collection (except for Chapter 25). These formalist talents were coupled, however, with creative thinking and with a cultivation of imagination and imprecision in the quest for new discoveries. The theory of cognitive dissonance is presented in a few sentences and in simple, succinct, and sweeping terms. There are hardly any specific definitions or operational principles. This deliberate conceptual vagueness initially

provoked considerable criticism. It also produced, it soon became apparent, more important ideas and experimentation than any other theory in social psychology.

Festinger, indeed, had warned repeatedly of "the trap of premature precision." Precision of design and measurement could obscure or kill the basic phenomenon. Exacting methodology could acquire functional autonomy and become its own raison d'être. In the name of cumulative research, available paradigms and means of measurement might dictate the argument and lead it towards unrelieved triviality and tedium. Unlike much behaviorist research, Festinger's work is not driven by a single overarching theory, which seeks different contexts for the exemplification of its basic argument. Nor is the research driven by the available techniques or observations. The initial vagueness of ideas is in deference to the preeminence of the problem, leaving room for conceptual growth. In Festinger's studies, the experimenter and the reader never lose sight of the phenomenon, and only rarely can they anticipate the outcome of the experiment. One usually learns something from a Festinger study, something no one knew before he had done the study.

The conception of the research, at its most serious, springs from considerable intellectual playfulness, even bravura. Often the execution of a study required similar qualities. In its early stages, the theory of cognitive dissonance is put to test by infiltrating, with two colleagues, a close-knit cult communicating with spacemen in flying saucers and preparing for the imminent end of the world. The chapter in this volume (Chapter 13) depicts the charged atmosphere in the cult. The book itself (Festinger, 1957; and see Festinger, 1987) also evokes the lot of the investigators: how they kept a continuous vigil at the home of the leader during the final days; how they would dash off to the toilet to take notes in private, or to a nearby hotel room to dictate observations; or how they were practicing standard evacuation procedures to board the saucer that would rescue the group of elects.

In building his arguments on the interaction between the laboratory and wider natural contexts, Festinger constantly expanded the range of acceptable evidence. He brought into the laboratory many phenomena which did not seem amenable to experimental analysis; conversely, he never hesitated to leave the safety of the laboratory or the familiarity of previous research when other, unconventional contexts appeared theoretically promising for the understanding of functional relationships or push the problem a bit further. In one research program, Festinger explored the minute processes of visual perception. Then, in *The Human Legacy* and related work (Chapters 18, 19), paleontological and archaeological data are brought to bear on the same fundamental questions about human nature and social organization that animate the experimen-

tal work. The analysis of the prehistoric record is made to yield evidence, more sparse and limited, but no less telling than data from an M.I.T. housing project, a cultist group, or a vision experiment. The many implications of the work for current psychological theory readily impose themselves on the reader. The prehistoric work demonstrates in yet another way that systematic psychology is not the sole province of the laboratory, nor is it spontaneously generated by the experimental design. Psychology, rather, entails an insistent scrutiny of reality, contemporary or historical, and a consequentiality of thought, which yielded, in Festinger's work, cumulative insights and a global view of human conduct unrivaled in the history of social psychology. The work is a striking realizatin of the scientific ideal set forth by Kant (1766/1968, Part 2, Chapter 3): "To pursue every inclination of our curiosity and to set no other limits to our passion for knowledge than the limits of our ability indeed befits scholarship. But it requires true wisdom to choose, among the countless problems which present themselves, those whose solution is important to humanity."

A common theme underlies many of Festinger's research programs. The inquiry into the dynamics of human behavior focuses on the individual change that follows conflict or social influence. The studies are experiments in calculated tension between alternatives or contrary forces, which impel a change in thinking, feeling, or behavior in foreseeable ways. The tension may arise from facing competing alternatives: in the early theory of decision-making, the individual is confronting such choice, and so are the animals in the study on differential appetite in the rat. In subsequent research, the tension was heightened and its source was located within the individual. In the theories on level of aspiration, informal social communication, or social comparison, the tension develops from the divergence between personal characteristics and external stipulations; between an individual's aspiration level for performance and the known performance of other individuals; between an individual's opinions or abilities and the standards of significant others. Finally, in dissonance theory, the tension is wholly internal: the individual holds simultaneously two beliefs which are psychologically inconsistent.

The 1942 study on differential appetite in the rat (Chapter 20), Festinger's M.A. thesis at the University of Iowa, already contained the seeds of the cognitive perspective of his work. Festinger's entire research challenged, then marked the end of the preeminence of reinforcement theory in social psychology. Dissonance theory, for instance, demonstrated that small reinforcements were more effective, in certain circumstances, than large reinforcements, in promoting behavioral change, and that the effects reflected cognitive processes. Festinger's animal studies pressed the critique of S-R theory in behaviorism's own

traditional domain and with its distinctive methodology. The differential appetite study suggested that the rats' behavior was linked to subjective considerations and to standards rooted in the animals' prior personal history. The study anticipated the concept of "relative deprivation," which would subsequently gain wide sociological currency (e.g. Stouffer et al., 1949; Merton and Kitt, 1950; Runciman, 1966). Stouffer and his colleagues described a number of cases in which the soldiers' satisfaction with army life did not reflect their objective well-being in the service; individual satisfaction was contingent, instead, on subjective standards on the comparison of one's condition with the lot of other pertinent groups of soldiers. The animal learning studies with Lawrence presented in this volume (Chapter 11) extend the reversal of behaviorist theory and techniques and propose that rats have cognitions, and indeed may reduce dissonance the way humans do. The studies challenged classic behavioral concepts by offering dissonance accounts for the maintenance of behavior patterns and resistance to extinction.

The studies on level of aspiration in this volume (Chapters 1, 2, 3), which also antedate "The American Soldier," further explore the inherent relativity of judgments. The theory proposes that an individual's sense of success or failure on a task is not simply influenced by absolute performance but by the relation of performance to level of aspiration. The goals which the individual seeks to attain are set, in turn, as a function of their desirability and of the subjective probability of success. Individual performance thus is influenced by the person's own goals and by the expectations or performance of other pertinent people. Classic sociological theory had focused on the influences of groups upon their members, until reference group theory drew attention, in the sixties, to the influence of groups to which the individual does not actually belong (see Merton, 1968). The chapter in this volume with K. Lewin and other colleagues (Chapter 3) anticipates such concerns and considers, analytically and empirically, the determinants of the selection of various groups of reference, including nonmembership groups.

The theory of informal social communication (Chapter 5) offered an analysis of pressures towards uniformity in a group, which has remained the prevalent perspective on processes of conformity. The theory conceptualizes both individuals and small groups as systems in tension. Differences of opinion *between* individual members of a group threaten the equilibrium of the group and generate pressures to make members conform in ideas or behavior. The theory identifies two major sources of pressure. One class of reasons for conformity are "group locomotion" reasons—the desire for appreciation by the group or for gratifications associated with the group, or the need to work jointly toward the achievement of some group goal. Alternatively, conformity may spring

from "social reality" reasons. Individuals are motivated to assess the correctness of their opinions, and when physical, objective means of validation are not available, they rely on the consensus of other people for confirmation of their beliefs. The distinction between the two kinds of motives for conformity recurs, in different guises, in most studies of social influence. Other studies of conformity had demonstrated the existence of the one or another kind of pressure toward conformity, but did not provide a theoretical understanding of the dynamics involved. For instance, Sherif's (1936) studies of the autokinetic effect illustrated the informational conformity of individual judgments in a highly ambiguous context. In contrast, Asch (1951) studied "group acceptance" motives for conformity, when unambiguous individual perceptions were called into question by a discrepant social consensus. It was Festinger, however, who developed the classic theoretical analysis of the processes of social influence evident in these and other studies of conformity.

Pressures towards uniformity often entail a change in patterns of group communication with the individual who holds a discrepant opinion. This process is at the center of another major research tradition in social psychology, concerned with attitude change through persuasive communication. The studies on this topic which are included in this volume (Chapters 22, 23, 24) reflect this approach to social influence, in which attempts at attitude change are based on a direct confrontation with the discrepant attitude or behavior.

The theory of social comparison processes (Chapter 6), published in 1954, developed the earlier ideas about "social reality" and self-evaluation into a seminal framework which is still influential today (e.g. Darley and Goethals, 1980; Rofe, 1984; Suls and Miller, 1977). The framework combined the notion of judgmental relativity developed in the studies of level of aspiration, with the processes of social influence and communication into a general theory of self-other comparisons in the assessment of one's opinions and abilities. Social theorists such as Cooley (1902) and Mead (1934) had previously emphasized the social influences on the self-concept. Social comparison theory for the first time explicated the dynamics of such influence, which were rooted in the inevitable discrepancies between the individual's own opinions and abilities and those of other people chosen for comparison. The theory specifies the antecedents of comparison; the criteria for the choice of others for reference; and the consequences of comparison, and of resultant discrepancies in a group with respect to opinions or abilities. The detailed arguments have found echoes in the subsequent elaborations of reference group theory. Within psychology, the idea of social evaluation exercised considerable influence. Schachter's (1959) classic work on the psychology of affiliation drew on the theories of social comparison and of

pressures towards uniformity, in exploring the motives for social affiliation and, particularly, the relationship between anxiety and affiliation. Schachter's theory of emotion (Schachter, 1964) demonstrated the implication of social comparison processes in emotional experience and in the identification of one's emotional states. Festinger's theory of social comparison and Schachter's theory of emotional experience were, in turn, combined with Heider's (1958) writings about person perception in an influential paper by Kelley (1967), which marked the beginning of the attributional perspective in social psychology.

Social comparison also played a role in work on equity theory (e.g. Austin, 1977), on social interaction (e.g. Thibaut and Kelley, 1959), on modeling (e.g. Berger, 1977), and on many other issues.

Social comparison examined how the individual incorporated and adapted to the standards of actual or imagined others. In contrast, cognitive dissonance theory considers pressures from within, as the individual confronts conflicts pitting, at times, his actual self against his imagined self. The theory of cognitive dissonance, first advanced in 1957, integrates experimental work, field observations, and formal arguments across many different subject matters. The simple and elegant propositions mark a profound and lasting departure from many commonplaces in psychology.

Traditional accounts of decision-making depict a deliberative process, in which the careful consideration and weighing of the reasons for and against available alternatives leads to an informed choice. Behavior directly executes individual intentions and goals, and the weight ultimately assigned to the various options can be inferred from the chosen course of action. Indeed, rationality is typically construed as purposive behavior oriented toward the alternative that emerged from the deliberations with the greatest weight attached to it. In consequence, all attempts at attitude or behavior change are directed at the deliberative process, prior to the actual decision. Such a conception also underlies, for example, the research on persuasive communication. Dissonance theory argued that a decision does not simply reveal the prior role of various considerations; instead, decision-making is a self-constructing process, in which the choice of a particular alternative alters prospectively the relative influence of the competing considerations. A decision or choice reinforces the appeal of the selected alternative, which becomes, after the choice, the individual's strongest preference, even if it did not carry such determining weight at the time of the decision. A process of self-justification changes the individual's preferences after the choice, and then influences future decisions. Dissonance theory thus starts where other theories left off: after the decision or the commitment have been made.

Dissonance also reverses the traditional relationship between attitude and behavior: in dissonance studies influence never is directed at the early, deliberative stages of the unfolding behavior, nor is it openly oriented to the behavior itself. Dissonance interventions modify the behavior in subtle ways, and thereby bring about a change in the antecedent attitude. This counterintuitive argument soon demonstrated its considerable power: dissonance studies, such as the ones represented in this volume (see Chapters 11, 12, 13, 14), were alone able to bring about profound and lasting behavioral change. Conceptually and experimentally, dissonance theory has been social psychology's most notable achievement.

The research program in visual perception marks Festinger's intellectual turn to a very different perspective in his exploration of basic psychological processes. Few others, such as Francis Crick, the biophysicist who helped unravel the molecular structure of DNA, ever undertook such a radical move into an entirely new and highly technical field. The visual system, Festinger argued, could provide insights into the workings of the central nervous system and into the nature of consciousness. Indeed, according to the efferent model of perception, which Festinger explores, visual experience is not at all a simple and straightforward process. The visual system is an unusual system in that it does not obtain information about eye position or eye movements from feedback from the extraocular muscles that move the eyes (inflow information). Instead, the visual system only gets knowledge about the position of the eye by monitoring the efferent (outflow) commands of the central nervous system to the eye muscles, which tell the eye where to go. This output information, disentangled from any sensory input, could afford a glimpse of the nature of consciousness. The efferent readiness theory presented in this collection (Chapter 15) extends earlier arguments of Wundt and J. G. Taylor. The theory suggests that perception is learned and consists of sets of acquired responses (such as eye movements) to visual input. The incoming stimulation arouses a learned program that controls a pattern of eye movements. Perception does not require that the eye movements *actually* be executed, and the activation of the preprogramed readiness to respond is sufficient to determine the conscious experience of perception.

Visual experience thus depends on several kinds of knowledge, which are not always all available or coordinated. Veridical perception of a moving target also requires the correct combination of accurate outflow information with inflow information about the movement of the target on the retina. Festinger's approach to vision, like his earlier work, takes advantage, in some studies, of the lack of coordination or incompatibility of available information, to gain important psychological insights. In the paper with Burnham and others (Chapter 15), the theory of efferent

readiness is tested by asking subjects to wear prism spectacles which cause straight lines to appear curved, and to make arm movements corresponding to the objective contour of the lines while viewing them through the prisms. The study with Easton (Chapter 16) explores a perceptual distortion, the Fujii illusion, which is attributed to a divergence between the oculomotor commands issued to the eyes and the actual behavior of the eyes. A target that actually moves with uniform speed in a square path will be perceived, instead, to follow a pincushion-like path. The illusion is linked to the fact that the eye is physically unable to suddenly turn at the corners of the square, in spite of instructions to do so by the central nervous system. Thus, the retinal information about the motion of the target differs from the reported visual perception, and the actual directions of the eye movements probably differ from what the eye was instructed to do.

The research on visual perception used sophisticated computations of minute phenomena to explore individual processes. In the historical investigations, Festinger again boldly shifts field and focus, to examine large-scale phenomena and an elementary data base. In *The Human Legacy* and related work (Chapters 18, 19), Festinger uses bones, tools, and other archaeological evidence with the virtuosity of an expert sleuth to reconstruct patterns of prehistoric life. As in the experimental work, Festinger focuses on the dynamics of change. He examines the transition to modern human society, through issues such as the origins of the sedentary way of life, the beginnings of religious belief systems, of war and slavery, and the emergence of large and stratified societies. Festinger's last, unfinished work carried the exploration forward into the Middle Ages. In this work, the contrasts between the Byzantine and Western societies and the profound technological and social changes in the West afforded the riddle and the road toward the understanding of people and society.

This collection of writings thus offers a privileged window onto an extraordinarily varied and enriching intellectual exploration. One can delight, in the following pages, in the many small gems or in the sweep of the larger canvas. The selection underscores Festinger's place as a towering figure in contemporary social science and as one of its foremost adventurers of the mind. The work has transformed, forever, the ways of doing social science and of thinking about people. It expands, immeasurably and enduringly, the scope of our understanding and experience.

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