

Empathy

A SOCIAL PSYCHOLOGICAL APPROACH

Mark H. Davis



SOCIAL PSYCHOLOGY SERIES

Empathy

A Social Psychological Approach



Mark H. Davis

Eckerd College

 **Routledge**
Taylor & Francis Group
New York London

Social Psychology Series

John Harvey, Series Editor

Empathy: A Social Psychological Approach, Mark H. Davis

Violence Within the Family: Social Psychological Perspectives,
Sharon D. Herzberger

Social Dilemmas, Samuel S. Komorita and Craig D. Parks

*Self-Presentation: Impression Management
and Interpersonal Behavior*, Mark R. Leary

*Experimental and Nonexperimental Designs in Social
Psychology*, Abraham S. Ross and Malcolm Grant

Intergroup Relations, Walter G. Stephan and Cookie White Stephan

First published 1996 by Westview Press

Published 2018 by Routledge

711 Third Avenue, New York, NY 10017, USA

2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

Copyright © 1994, 1996 Taylor & Francis

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Notice:

Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Davis, Mark H.

Empathy : a social psychological approach / by Mark H. Davis.

p. cm.

Madison, Wis. : Brown & Benchmark Publishers, c1994.

Includes bibliographical references and index.

ISBN 0-8133-3001-7 (pbk.)

1. Empathy. 2. Sympathy. 3. Altruism. 4. Helping behavior—Social aspects.

I. Title.

BF575.E55D37 1996

152.4'1—dc20

96-422

CIP

ISBN 13: 978-0-8133-3001-3 (pbk)

For Linda



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

CONTENTS

Preface ix

1 History and Definitions 1

Historical Views of Sympathy and Empathy 3

Sympathy 3

Empathy 5

Contemporary Views of Empathy 7

Problems with Contemporary Views 9

Empathy: An Organizational Model 12

Antecedents 14

Processes 15

Intrapersonal Outcomes 17

Interpersonal Outcomes 19

Advantages of the Organizational Model 20

A Multidimensional Approach to Empathy 21

2 Evolutionary Origins of Empathic Capacities 23

Empathy as an Innate Human Capacity 24

Empathy as a Mechanism for Altruism 24

Empathy as a Variety of Social Intelligence 29

Evaluation of the Evolutionary Argument 33

Hoffman's Theory of Empathy: A Synthesis 37

Modes of Empathic Arousal 37

Cognitive Capabilities: The Cognitive Sense of Others 41

The Affective-Cognitive Synthesis 42

Summary and Conclusion 45

3	Assessment of Individual Differences in Empathy	46
	Measures of Role Taking: Children	47
	Perceptual Role Taking	48
	Cognitive Role Taking	49
	Affective Role Taking	50
	Measures of Affective Outcomes: Children	51
	Measures of Role Taking and Non-Affective Outcomes: Adults	52
	Measures of Affective Empathy: Adults	55
	Multidimensional Measures of Empathy: Adults	55
	Sex Differences in Empathy-Related Constructs	58
4	Origins of Individual Differences in Empathy	62
	Inherited Predispositions	62
	Evidence from Twin Studies	63
	The Role of Temperament	65
	The Heritability of Role-Taking Tendencies	68
	Environmental Influences	70
	Affective Quality of Family Relations	70
	Parenting and Discipline Techniques	74
	Parents' Dispositional Empathy	78
	Summary	80
5	Non-Affective Outcomes	82
	Accuracy in the Perception of Others	83
	Empathy Defined as Accuracy	83
	Empathy as an Influence on Accuracy	85
	Summary	91
	Attributions Regarding Other People	93
	Instructional Sets and Causal Attributions	94
	Observer-Target Relationship and Attributions	96
	Summary	99
	Evaluative Judgments of Others	100
	Liking for Individual Others	100
	Tolerance for Outgroups	102
	Summary	102
6	Affective Outcomes	104
	Parallel and Reactive Responding	105
	Causal Antecedents of Affective Responding	107
	Three Approaches: Hoffman, Batson, and Eisenberg	108
	Theoretical Propositions	110
	Parallel Outcomes	111

	Motor Mimicry	111
	Role Taking	114
	Individual Differences	116
	Similarity between Observer and Target	116
	Reactive Outcomes	118
	Empathic Concern	118
	Personal Distress	120
	Evaluating the Theoretical Propositions	122
	Summary	124
7	Altruism and Helping Behavior	126
	Definitions: Helping and Altruism	127
	Affective Outcomes and Helping	129
	Reduction of Aversive Arousal	130
	Negative State Relief	132
	“True” Altruistic Motivation	133
	Non-Affective Outcomes and Helping	141
	Perspective Taking and Helping	144
	Observer/Target Similarity and Helping	145
	Individual Differences	146
	Individual Differences and Helping Behavior	146
	Individual Differences and “True” Altruism	148
	Summary and Conclusion	151
8	Aggression and Antisocial Behavior	153
	Theoretical Links between Aggression and Empathy	154
	Cognitive Links	154
	Affective Links	155
	Non-Affective Outcomes and Aggression	157
	Affective Outcomes and Aggression	159
	Perspective Taking and Aggression	161
	Situational Factors: Observer-Target Similarity	162
	Individual Differences in Empathy and Aggression	163
	Role Taking Measures	164
	Affective Measures	167
	Summary and Conclusion	172
9	Social Relationships and Social Behavior	176
	Theoretical Links between Empathy and Social Behavior	177
	Davis’ Mediation Model	178
	Bradbury and Fincham’s Model	180
	The Domain of Relationship Behaviors	182

	Affective Outcomes and Social Relationships	184
	Non-Affective Outcomes and Social Relationships	186
	Role Taking and Social Relationships	188
	Dispositional Empathy and Social Relationships	189
	Global Evaluation/Satisfaction	189
	Considerate Social Style	191
	Good Communication	195
	Conflict and Conflict Management	197
	Evaluation of the Models	199
10	Where We Have Been and Where We Should Go	201
	Where We Have Been	202
	Where We Should Go	204
	Empathy-Related Processes	205
	New Measurement Methods	209
	Usefulness of the Organizational Model	215
	Conclusion	221
	References	222
	Index	247

PREFACE

I have a confession to make. After studying empathy in one form or another for over 15 years, I am *finally* beginning to feel as though I have some understanding of the topic. Part of the reason it has taken so long, I fear, is dispositional as there are, no doubt, many others who are quicker studies than I. But some of the reason also lies in the nature of the topic itself; empathy is a multifaceted phenomenon of interest to psychologists of many different stripes (i.e., clinical, developmental, sociobiological, personality, social) as well as to a variety of non-psychologists including anthropologists, philosophers, and theologians. In my defense, therefore, I would suggest that one reason it is difficult to get a good handle on empathy is that it *has so many handles*.

One of the best ways to learn about a subject, of course, is to teach it, and that has certainly been my experience while writing this book. Organizing the multitude of investigations relevant to this topic, explaining them to an unseen audience, and placing the findings within a coherent organizational framework have been enormously educational. It is my hope that this book will provide readers with much of the understanding of empathy that I have gained while sparing them the considerable inconvenience of writing a book on the topic!

Although empathy has relevance to many different disciplines, my approach to the topic has unabashedly been that of a social/personality psychologist. What that means, at the most general level, is that my training in this tradition has inevitably influenced the course of this project: not only the selection and interpretation of the material included here, but also the kind of organization

imposed on that material. What it means, more specifically, is that some topics not central to a social/personality approach—most notably empathy's role in the clinical setting—are not included at all. While such matters are important, they are somewhat peripheral to a mainstream social psychological approach; more importantly, perhaps, there are already books on those topics. Thus, the clear focus in this endeavor has been on doing something new: examining empathy from the standpoint of contemporary social/personality psychology—emphasizing these disciplines' traditional subject matter (e.g., emotion, cognition, helping, aggression) and its research techniques (survey research, laboratory experiments).

As I wrote this book, the primary readers that I had in mind were advanced undergraduate and graduate students. Thus, my goal was to provide a thorough, readable, even-handed summary of contemporary empathy research, more advanced than that in a basic textbook, but not as technical as one intended solely for a professional audience. Even so, my hope is that non-student, professional readers will also find something of value in this work. If nothing else, it may suggest some ways in which empathy, broadly defined, can be relevant to their more traditional research interests.

Finally, I would like to offer thanks to several parties who were especially helpful to me as I worked on this project: to Eckerd College for the sabbatical leave during which I wrote most of this book; to my psychology colleagues at Eckerd, Sal Capobianco, Jeff Howard, and Jim MacDougall, who were helpful in numerous ways both large and small; to Cathy McCoy of the Eckerd College library for her unflagging willingness to locate yet another reference; and to Nancy Eisenberg, Arizona State University; Bob Hogan, University of Tulsa; Paul Miller, Arizona State University West, and Linda Kraus, University of Tampa, who read some or all of this book at various points and who provided me with a host of very useful comments. To all of you, my deepest thanks.

Mark H. Davis

CHAPTER

1

History and Definitions

Historical Views of Sympathy and Empathy

Sympathy

Empathy

Contemporary Views of Empathy Problems with Contemporary Views

Empathy: An Organizational Model

Antecedents

Processes

Intrapersonal Outcomes

Interpersonal Outcomes

Advantages of the

Organizational Model

A Multidimensional Approach to Empathy

The fact that human beings are capable of enormously selfish behavior can hardly be disputed. One need only peruse the daily newspaper for evidence. In fact, in today's morning paper there were stories about a 14 year old girl stabbed to death by her ex-boyfriend, two teenagers who bludgeoned to death an acquaintance, prison guards who beat up a prisoner in restraints, a young man who stabbed and killed a 62 year old woman, threats of renewed violence in South Africa, an impending Ku Klux Klan rally in Florida, and a man whose home was virtually cleaned out by two house-sitters, people he considered "among my best friends." Admittedly, newspapers publish "news"—that is, what is considered unusual. Even so, the widespread evidence of our capacity to act in ways that serve our own interests at the expense of others seems undeniable.

Moreover, we are fundamentally not very surprised to read such stories. The fact that we are capable of ignoring the unpleasant consequences our actions have on others seems sadly self-evident. A robust hedonism, a willingness to maximize our own outcomes no matter the cost to others, unfortunately seems to have a considerable survival value. It's hard for most of us to imagine a successful species whose members did not display this kind of powerful self-interest. In fact, if anything needs explaining, it's why we don't act in completely egocentric ways all of the time.

This question has been around for quite a while, of course, and one early answer to it can be found in Thomas Hobbes' *Leviathan* (1651). Hobbes argued that the nature of humans is such that the inevitable outcome of social living is a state of virtual warfare, with each against all. Because there are no internal reasons to willingly curb our desires, everyone strives to maximize personal gain at the expense of others, producing a human existence which is, in Hobbes' famous phrase, "solitary, poor, nasty, brutish, and short." In fact, the only forces said to impel people toward peaceful existence at all are a fear of death and a desire for creature comforts. In practical terms, this means that peace and social order only result when all individuals in a society are willing to surrender individual rights and freedoms to the state, which then exerts the kind of control over individual egoistic actions that the individuals themselves will not.

A less pessimistic possibility also exists. Writing a century after Hobbes, Adam Smith (1759/1976) offered a different vision in which the regulation of egoistic behavior comes not from an external source like the state, but springs instead from limits that individuals place on themselves. What makes us place these limits on ourselves? The answer, for Smith, is what he calls **sympathy**, and what is often today termed **empathy**. What Smith means by sympathy is the shared feeling that results when we observe other people in emotional states, the compassion we feel for their sorrow, the resentment when they are slighted, the joy when they triumph. This affective bond between individuals changes the whole equation that Hobbes was trying to solve. If the feeling states of separate individuals are linked, then the Hobbesian view of humans as fundamentally isolated and selfish does not hold, and the existence of some external agent enforcing a grudging cooperation is no longer necessary. Instead, pro-social actions can be internally generated rather than externally coerced, allowing us to act in a seemingly selfless fashion.

Although Smith (along with Hume, 1739/1968) was among the first to write explicitly about this phenomenon, many others

have done so since. The remainder of this chapter will review some of the major definitions of empathy which have been advanced over the years, focusing on those which continue to influence contemporary thinking. Following this, I will attempt to organize the various definitions of empathy into a tidier taxonomy within a conceptual framework which treats empathy as a multidimensional phenomenon. First, however, it's necessary to start at the beginning.

Historical Views of Sympathy and Empathy

Sympathy

Although sympathy and empathy are deeply intertwined today, the two concepts initially grew out of separate traditions (Wispé, 1986). One of the first, and best, accounts of sympathy came from the economist and moral philosopher Adam Smith (1759/1976). Smith felt that we are imbued by nature with an ability, in fact a near irresistible tendency, to experience a “fellow-feeling” when we observe someone experiencing a powerful emotional state. This fellow-feeling can take many forms: pity for the sorrowful, anguish for the miserable, joy for the successful, and so on. Thus, we might experience an affective state which more or less matches the state we observe, such as sharing fear with a frightened person, or we might experience an emotion such as pity for a beggar, which seems broadly compatible but is not precisely the same. Both kinds of reactions are placed by Smith, however, under the general heading of **sympathy**.

What is the source of these fellow-feelings? Smith argues that it is solely through the power of imagination that sympathy is possible, because our senses alone can never fully inform us of the physical and affective experiences of another. Specifically, Smith argues that through imagination we “place ourselves in his situation . . . enter as it were into his body, and become in some measure the same person with him.” By means of imagination we come to experience sensations which are generally similar to, although typically weaker than, those of the other person.

Another influential view of sympathy came over a century later, in Herbert Spencer's (1870) *Principles of Psychology*. Spencer started with the idea of an underlying sociality said to exist in many species, including humans. In such species, Spencer argued, a tendency to affiliate with species-mates served an adaptive function, particularly in the area of self-defense, because of the safety provided by numbers. It followed, he believed, that over time there

developed in these species a feeling of pleasure in affiliation and a commensurate displeasure when deprived of such social interaction. The net result of these feelings is a high level of social contact among these species. Given this high level of social contact, sympathy develops as a result of repeated association.

Consider, for example, the case of sympathetic fear. Spencer argues that the stimulus which creates fear in one member of a species (the sound of an approaching predator) also produces in that creature a “fear reaction” (alarm cries, escape). Other members of the species present at the time not only experience fear in response to the predator, but also experience simultaneous associations between the predator’s sounds, their own fear, and the fear reactions of others. Over time, the fear reactions of others come to elicit fear in the individual even in the absence of frightening stimuli. One implication of Spencer’s ideas is that sympathy is largely a means of communication, with the reactions of others coming to signify important information regarding environmental conditions. This phenomenon, which prompts all members of a group to quickly experience the same affective state, helps make it possible to coordinate the behavior of many individuals.

McDougall’s (1908) *Introduction to Social Psychology* provided another influential treatment of sympathy which focused on the mechanism by which target and observer actually come to share emotional reactions. In McDougall’s instinct theory, there are two ways to induce an emotion. The first is through the “biologically adequate” cause, such as a loud noise or frightening animal. The second way is through the perception of that emotion in action in another person, what he termed *primitive passive sympathy*. Observing emotion in others tends to produce the same emotion in an observer, McDougall argued, because for each of the primary emotions there exists a specific perceptual mechanism, called a “perceptual inlet,” which is designed to receive particular affective cues of others and to translate those cues into a shared emotional response. For McDougall sympathetic reactions were not the result of “imagining ourselves into” the experiences of another (Smith), or of learning based on repeated prior experiences (Spencer), but were the automatic result of built-in, “hard-wired” perceptual mechanisms. Despite these differences regarding mechanisms, however, all three approaches focused primarily on the same basic phenomenon—the sharing of affect between two individuals—and all three used the term “sympathy” to describe it. During that time, however, a different way of conceptualizing self-other connections was emerging.

Empathy

Sympathy, as we have seen, had its earliest roots (Hume; Smith) in 18th century moral philosophy. Empathy, in contrast, came from the term *Einfühlung*, initially used in German aesthetics. In its original usage it referred to the tendency of observers to project themselves “into” that which they observe, typically some physical object of beauty. Lipps (1903, 1905) appropriated the term for use in more psychological contexts, first applying it to the study of optical illusions and later to the process by which we come to know other people. The English word *empathy* was actually invented by Titchener (1909) as a “translation” of Lipps’ *einfühlung*.

Both Lipps and Titchener believed that the mechanism through which empathy occurred was an inner imitation, or *inner Nachahmung*, of the observed person or object, a process referred to today as motor mimicry. Lipps (1926) argued that witnessing another’s emotional state prompts the observer to covertly, internally, imitate the other’s emotional cues (for example, tensing our muscles when witnessing someone under stress). The result of this process is the production of similar, though weaker, reactions in the observer. This sharing of emotions between target and observer was said to foster a better understanding of the actor as well.

There is an important yet subtle difference between the older concept of sympathy and the newer concept of *einfühlung/empathy*. Sympathy as conceptualized by Smith, Spencer, and McDougall had a largely, though not entirely, passive flavor to it. The emphasis was on ways in which an observer came to feel what another felt, or was moved by another’s experience. In contrast, empathy suggested a more *active* attempt by one individual to get “inside” the other, to reach out in some fashion through a deliberate intellectual effort. This distinction is not perfect, of course; Smith’s explanation for sympathy did hinge on an imaginative process of placing ourselves in others’ situations, a process which seems active rather than passive, and thus closer to the essence of the newer term. Overall, however, the new concept of empathy put a different, more active spin on the question of emotional sharing.

One result of conceptualizing empathy in this more active fashion was that it placed a greater emphasis on deliberate cognitive processes. While shared affect had previously been seen as resulting from largely passive associative learning (Spencer) or biological mechanisms (McDougall), empathy as conceived by Lipps and Titchener identified the observer as a willful agent deliberately making an effort to step outside the self and “into” the experiences

of others. Within such a theoretical stance the active process of empathizing is highlighted, and a series of theorists began to focus on this process in their work.

One of the first to argue in this more cognitive vein was Kohler (1929). Rather than continuing to focus on “feeling into” the experiences of another, Kohler held that empathy was more the understanding of others’ feelings than a sharing of them. One implication of this view is that the mechanisms by which the affective sharing was said to occur, such as motor mimicry and “perceptual inlets,” were to some degree beside the point. Understanding other people, as opposed to feeling what they felt, could be accomplished merely by viewing and interpreting the actor’s actions, movements, and physical cues. Processes leading to affective sharing were no longer essential.

At that time two highly influential theorists separately addressed, in their own ways, the question of empathy, and both offered views which emphasized the cognitive over the emotional. George Herbert Mead’s (1934) work placed a huge emphasis on the individual’s capacity to take on the role of other persons as a means of understanding how they view the world. The ability to do this was seen as an extremely important component in the developmental process of learning to live effectively in a highly social world. In fact, meaningful social organization would be largely impossible without the ability to anticipate the reactions that one’s behavior will evoke in others, and to use those anticipated reactions in tailoring one’s behavior to fit a variety of different social circumstances.

At roughly the same time Jean Piaget (1932) was advancing his theories of child development, with a similar emphasis on a crucial cognitive skill—the ability to decenter. In Piaget’s view, the child begins as a creature incapable of differentiating between the experiences of self and those of others. Only as children progress through the stages of cognitive development do they become capable of making this distinction. The ability to decenter, or to abandon the child’s original and literally “self”-ish perspective, is thus an integral part of social development.

The similarity between the constructs of role taking and decentering is clear. Both emphasize a primarily cognitive process in which the individual suppresses his or her usual egocentric outlook and imagines how the world appears to others. In both cases this process is said to underlie later cognitive development, and in both cases it is thought to make possible more effective, less contentious social interactions. The essentially simultaneous appearance of these two complementary, fundamentally cognitive, views signalled an important shift in the direction taken by subsequent empathy research.

One evidence of this shift is the emphasis by later developmental psychologists on the study of children's role taking. Treatments of this topic have typically distinguished between *perceptual* role-taking, or the ability to imagine the literal visual perspective of another, *cognitive* role taking, the ability to imagine others' thoughts and motives, and *affective* role taking, the ability to infer another's emotional states (Eisenberg, 1986) with the latter two receiving the most empirical attention. It should be noted that affective role-taking in this context refers only to an awareness of others' emotional states and does not necessarily include any affective reaction in the observer. Eventually an impressive series of techniques were developed to assess individuals' levels of role-taking capacity in both the cognitive (e.g., Chandler, 1973; Flavell, Botkin, Fry, Wright, & Jarvis, 1968) and affective (e.g., Chandler & Greenspan, 1972; Feshbach & Roe, 1968; Rothenberg, 1970) realms. As predicted by both Mead and Piaget, the evidence suggests that role-taking skill generally increases with age throughout childhood (Eisenberg & Mussen, 1989).

A second evidence of the cognitive shift was the strong emphasis, especially during the 1940's and 1950's, on empathy's role in enhancing accuracy in person perception, what is sometimes termed *social acuity*. Much of the research during this period was predicated on the idea that empathy consists of an ability to accurately imagine others' viewpoints (e.g., Chapin, 1942; Kerr & Speroff, 1954). In fact, some of these approaches essentially equated empathy with the accurate perceptions of others (e.g. Dymond, 1948; 1949; 1950). As we shall see in later chapters, however, research on interpersonal accuracy came to a rather abrupt halt in the 1950's when the most popular technique for assessing accuracy was found to have some serious methodological problems. It was partially as a result of this, in fact, that more recent theorizing about empathy began to re-emphasize the emotional side of the empathy coin.

Contemporary Views of Empathy

Among contemporary empathy theorists, Ezra Stotland and colleagues (Stotland, 1969; Stotland, Sherman, & Shaver, 1971) were perhaps the first to again conceive of empathy in solely affective terms. Stotland (1969, p. 272) defined empathy as "an observer's reacting emotionally because he perceives that another is experiencing or is about to experience an emotion." Thus, Stotland specifically distinguished affective empathy from cognitive processes related to accuracy, although he also discussed ways in which the

two separate constructs might be related. Stotland's view of empathy therefore bears a strong resemblance to the historical definitions of sympathy discussed earlier. As did they, this definition also focuses exclusively on the affective responses experienced by one person in reaction to the experiences of another. It should be noted, however, that while the earlier views explicitly or implicitly assumed that the nature of the observer's emotion would parallel that of the target, no such assumption is made in Stotland's definition. For example, an observer's gleeful reaction to the pain of another would still qualify as empathy. Stotland et al. (1971) refer to this as *contrast empathy*.

More recent contemporary theorists have also tended to define empathy solely in terms of affective responses, but unlike Stotland, they have also generally restricted the term empathy to emotional reactions which are at least broadly congruent with those of the target (Barnett, 1987; Eisenberg & Strayer, 1987; Hoffman, 1984; Gruen & Mendohlson, 1986). In fact, the influential contemporary approach of Dan Batson (Batson, 1991; Batson, Fultz, & Schoenrade, 1987), is even more limited. Empathy, for Batson, consists specifically of other-oriented feelings of concern and compassion which result from witnessing another person suffer. Thus, in Batson's view even an empathic match of emotions is not empathy; that term is reserved for compassionate feelings alone.

One exception to this recent consensus which defines empathy as a congruent affective reaction is the position of Lauren Wispé (1986, 1991). Emphasizing the two separate traditions from which sympathy and empathy developed, Wispé argues that sympathy is the "heightened awareness of the suffering of another person as something to be alleviated" (Wispé, 1986, p. 318). It thus seems very close to Batson's view of empathy as other-oriented sympathy, and reasonably close to the most common modern conception of empathy as an emotional response congruent with that of the target. In contrast, empathy for Wispé (1986, p. 318) is an "attempt by one self-aware self to comprehend unjudgmentally the positive and negative experiences of another self." It is a more active, effortful process in which the observer tries to understand the target by deliberately "reaching out" to the other. Thus, Wispé's definition of empathy stays close to empathy's original roots (e.g., Lipps, 1903, 1905; Titchener, 1909), and has a markedly more cognitive tone than most other contemporary views.

The most ambitious of the modern empathy theorists is probably Martin Hoffman (1984; 1987), whose ideas will be explored in more detail in the next chapter. At this point it will suffice to only

briefly outline Hoffman's position. Hoffman defined empathy in a fashion similar to most other contemporary theorists as "an affective response more appropriate to someone else's situation than to one's own" (Hoffman, 1987). Within his larger theoretical framework, however, Hoffman also addresses a number of other important constructs related to empathy. In brief, children are said to move developmentally from a stage in which they have no sense of a self-other distinction, reacting to the distress of others with a personal distress of their own, to a more advanced state in which the growing cognitive sense of self allows the child to experience both a self-oriented distress and a more advanced distress experienced for other people. As role-taking skills develop, this other-oriented distress increasingly becomes a form of true compassion for others. Thus, Hoffman's theoretical framework encompasses cognitive role-taking, personal feelings of distress created by others' distress, and feelings of sympathy/concern for the other, all of which qualify as empathy in one or more theoretical schemes.

Problems with Contemporary Views

The nature of empathy has been and continues to be a matter of some disagreement among those who toil in this vineyard. In particular, there is one central, recurrent, and seemingly intractable problem: the term empathy is routinely used to refer to two distinctly separate phenomena, cognitive role taking and affective reactivity to others. Despite virtually universal recognition that these two constructs must be distinguished from one another, the label "empathy" continues to be applied to both constructs, a fact which contributes in no small way to the continuing semantic confusion in empathy research. The two related factors which seem to be most responsible for the persistence of this state of affairs are the semantic problem resulting from the fact that key terms have long carried extra meaning, and the fact that there has been a long-term confusion between empathy as process and empathy as outcome.

Consider the semantic problem first. The two key terms in this area are empathy and sympathy, and both have been weighed down with extra meaning from the very beginning of their use. Consider Smith's (1759/1776) discussion of the meaning of sympathy:

"Pity and compassion are words appropriated to signify our fellow-feeling with the sorrow of others. Sympathy, though its meaning was, perhaps, originally the same, may now, however, without much impropriety, be made use of to denote our fellow-feeling with any passion whatever." (Smith, 1759/1776, p. 10)

In this passage Smith identifies a phenomenon in which observers experience fellow-feeling with a wide variety of observed emotions, but acknowledges using a term to describe this—sympathy—which more specifically refers to feelings of compassion for another's sorrow. Unfortunately, the choice of such a meaning-laden term set the stage for later confusion. Because the more specific meaning of sympathy as compassion is the more common, colloquial usage, recruiting the term to refer to the more general experience of fellow-feeling ran into some difficulty. In fact, as Wispé (1986) notes, the term sympathy (used in Smith's sense) essentially disappeared from social psychology by the 1950's. Without this generally recognized term to refer to the phenomenon of shared affective reactions, the newer term empathy was increasingly used for this purpose.

This process was made easier because the newer term was itself fraught with extra meaning. From the beginning, empathy was seen as a means of "knowing" another through a projection of the self "into" the other. This process is noticeably more active than the rather passive sympathy process described by Spencer and McDougall. At the same time, however, there was also an element of affective responsiveness inherent in the term; the process of projecting oneself into another was, after all, said to produce affective changes in the observer. Given the dual cognitive/affective nature of the term empathy, and the gradual loss of the term sympathy to denote affective sharing, it was perhaps inevitable that such sharing would increasingly be labelled "empathy." The end result is that today this term carries a surplus of meaning, being routinely used to characterize phenomena both cognitive and affective, both active and passive.

The other factor contributing to the current confusion has been the pervasive mingling of *process* and *outcome* in thinking about empathy. The distinction is an important one. Process, in the sense that I intend, refers to something that happens when one is exposed in some fashion to another (usually distressed) person. Attempting to entertain the cognitive or emotional perspective of the other, for example, is a process; unconsciously imitating the other's facial or postural movements is another. An outcome, in contrast, refers to something that results from these processes, for example, emotional responses in the observer or a more accurate cognitive understanding of the other. Definitions of empathy or sympathy which focus on affective responses are, therefore, outcome-oriented definitions. Approaches which define empathy as role taking, however,

more typically focus on the process rather than the outcome. Viewed in this way, it can be seen that part of the definitional confusion regarding empathy results from the fact that theorists and researchers, while all studying "empathy," are in fact frequently addressing quite different parts of a larger phenomenon. Thus, failing to distinguish between process and outcome also contributes to the ongoing confusion regarding the "true" nature of empathy.

Like the blind men with the elephant, each of whom was convinced that the part of the creature he was holding defined its nature, empathy theorists and researchers have grappled with what is ostensibly the same subject yet reached sometimes dramatically different conclusions about what it really is. Is it the cognitive act of adopting another's perspective? A cognitively based understanding of others? An affective reaction to the emotions of another? If so, what kind of emotion? The same? Similar? Must it have a compassionate tone? The answer to all of these questions is "yes"—and that is the problem. Despite empathy's important role in a variety of contexts, many of which will be discussed in this book, the topic has generally suffered from the lack of a clear, compelling organizational framework. In large part this failure has been the result of the fragmented way in which the key constructs have been conceived and communicated.

The consequences of this state of affairs are easy to recognize. Separate research traditions have grown up around each of the major constructs, ostensibly investigating the same phenomenon but most often pursuing one "brand" of empathy with only a tangential recognition of the other. When other approaches have been recognized, it has frequently been in the context of explaining why they do not "truly" qualify as empathy. Only a few efforts (e.g., Hoffman, 1984, 1987) have been made to explicitly consider the ways in which the two phenomena, separated by a common label, might actually fit together. As a result, the study of empathy, as much as any topic in psychology, has been marked by a failure to agree on the nature of and relations among its core constructs.

Given this state of affairs, a highly useful tool would be an organizational model which makes clear the similarities and differences between the various constructs that fall within empathy's roughly defined domain. To that end, the next section lays out such a model of empathy-related constructs, with an indication of how historical and contemporary approaches fit into this system. Parts of this framework are borrowed from Hoffman (1984) and Staub (1987), with additional original elements freely added. This

organizational scheme provides a conceptual framework within which the remainder of the book will be organized. Figure 1.1 contains the major elements of this model.

Empathy: An Organizational Model

One danger posed by the current multiplicity of empathy definitions is the possibility that when empathy is defined in a particular manner, any constructs excluded by the definition are in some sense seen as peripheral. Thus, if empathy is defined as an affective response, then cognitive role taking isn't empathy and becomes less important. If empathy is more specifically defined as experiencing similar affect, then dissimilar feelings fall outside the area of interest. The unintended result of such a series of exclusive definitions is to Balkanize the study of empathy. The spirit of this model is just the opposite; its goal is to emphasize the connectedness of these constructs.

To do so, the model is based on an inclusive definition of empathy. Empathy is broadly defined as a set of constructs having to do with the responses of one individual to the experiences of another. These constructs specifically include the *processes* taking place within the observer and the affective and non-affective *outcomes* which result from those processes. This definition therefore includes under the heading "empathy" a much wider range of phenomena than is typical. This is done deliberately in order to highlight the connections among constructs which are sometimes overlooked. Based on this definition, the organizational model conceives of the typical empathy "episode" as consisting of an observer being exposed in some way to a target, after which some response on the part of the observer, cognitive, affective, and/or behavioral, occurs. Four related constructs can be identified within this prototypical episode: **antecedents**, which refer to characteristics of the observer, target, or situation; **processes**, which refer to the particular mechanisms by which empathic outcomes are produced; **intrapersonal outcomes**, which refer to cognitive and affective responses produced in the observer which are not manifested in overt behavior toward the target; and **interpersonal outcomes**, which refer to behavioral responses directed toward the target.

The relations among these four constructs appear in Figure 1.1. As the figure illustrates, associations are hypothesized to exist between a construct (e.g., antecedents) and all those constructs appearing later in the model (e.g., processes, intrapersonal outcomes, and interpersonal outcomes). However, the logic of the model also

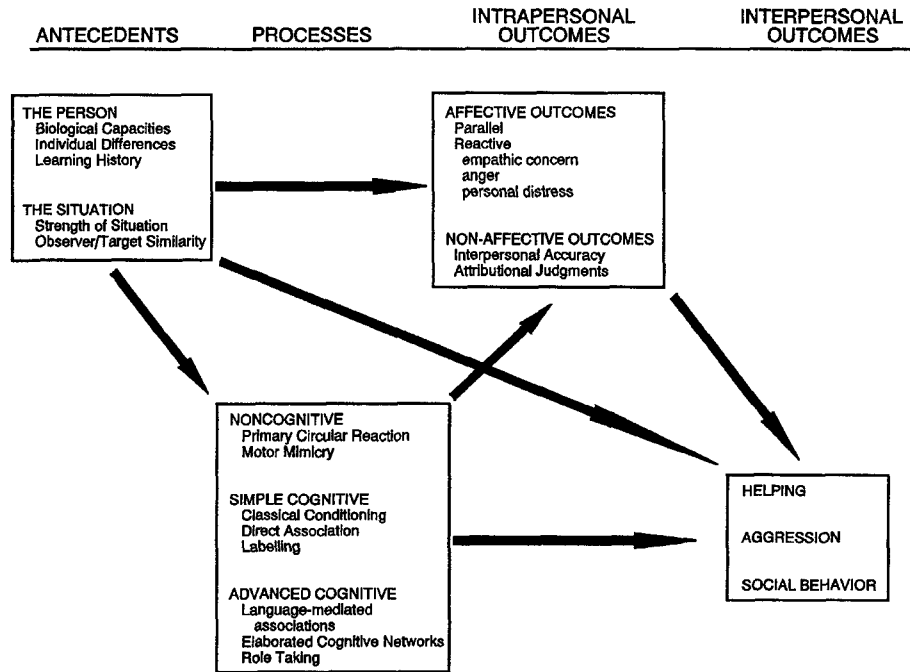


FIGURE 1.1
The organizational model

implies that stronger associations will typically be found between constructs which are adjacent in the model such as between antecedents and processes, between processes and intrapersonal outcomes, and between intrapersonal and interpersonal outcomes. Thus, the most powerful influences will be exerted by the most proximal constructs, with distal variables having a more modest effect. With this in mind, let us now consider each construct in turn.

Antecedents

The Person

All observers bring certain characteristics to an episode which have the potential to influence both processes and outcomes. One such characteristic is the simple *capacity* for empathy, for example, the intellectual ability to engage in role taking or the species-wide capacity to experience affect in response to witnessing affect in others. Also included here would be the previous *learning history* of the individual, including the socialization of empathy-related values and behaviors. Finally, a very important set of characteristics involves *individual differences* in the tendency to engage in empathy-related processes or to experience empathic outcomes. A variety of individual difference measures have been developed over the years for the purpose of assessing the stable dispositional tendency to engage in empathy-related processes such as perspective taking (e.g., Davis, 1980; Hogan, 1969) or to experience empathy-related affective responses (e.g., Davis, 1980; Mehrabian & Epstein, 1972). These measures fall under the heading of person variables because they represent stable characteristics of the individual which influence the likelihood of engaging in an empathy-related process or experiencing an empathy-related outcome during any particular empathy episode.

The Situation

All responses to another person, whether cognitive or affective, emerge from some specific situational context. Whether a face-to-face encounter with a family member, witnessing a handicapped child during a telethon, or reading about refugees in the newspaper, all reactions to others are rooted in specific situations which vary along certain dimensions. One such dimension is what we can call the *strength of the situation*. Especially with regard to affective reactions, situations vary tremendously in terms of their power to evoke a response from observers. Strong displays of negative

emotion, especially by weak or helpless targets, are particularly able to engender powerful observer responses. In fact, faced with such extremely strong situations, other variables, both situational and dispositional, may recede in importance. In less powerful situations other factors, including characteristics of the observer, may play a larger role.

A second situational feature is the *degree of similarity* between the observer and target. (Similarity is actually a joint function of both the target and the observer, but for the sake of convenience we will consider it here.) Greater observer-target similarity is generally thought to increase the likelihood and/or intensity of the observer's empathic response, whether affective or non-affective. Research addressing this issue is reviewed in Chapters 5 and 6.

Processes

The second construct within the organizational model consists of the specific processes which generate empathic outcomes in the observer. Building on the work of Hoffman (1984), and Nancy Eisenberg (Eisenberg, Shea, Carlo, & Knight, 1991), I will argue that three broad classes of empathy-related processes can be identified, chiefly distinguished from one another by the degree of cognitive effort and sophistication required for their operation. These processes can be considered empathy-related because they frequently occur during episodes in which an observer is exposed to a target, and because they often result in some empathy-related outcome. However, it should be emphasized that these processes can occur in other contexts as well, and need not produce an empathy-related outcome when they do.

Noncognitive Processes

Some processes which lead to empathic outcomes seem to require very little cognitive activity. Newborn infants, for example, tend to cry in response to hearing other infants cry, a phenomenon that occurs so early in life that it seems unlikely to be the result of any learning. This apparently innate tendency, which Hoffman (1984) refers to as a *primary circular reaction*, can therefore be considered a non-cognitive process which produces an affective outcome in the infant "observer." McDougall's innate "perceptual inlets," which virtually automatically transform witnessed emotion into experienced emotion, also appear to qualify as a noncognitive mechanism.

Another noncognitive process is *motor mimicry*, the tendency for observers to automatically and largely unconsciously imitate the

target. The hypothesized result of such mimicry is the production in the observer of an emotional state consistent with the target's. This process can be seen in the work of Lipps (1926) and Titchener (1909), who also argued that mimicry by observers has the effect of producing shared affect. Although these early conceptions of mimicry (or *inner Nachahmung*) viewed it as a somewhat deliberate strategy for "feeling into" the other, more recent approaches (e.g., Hoffman, 1984; Vaughan & Lanzetta, 1980) have treated it as a relatively automatic, largely non-cognitive process. It is therefore included under the non-cognitive category in the model.

Simple Cognitive Processes

In contrast to the noncognitive processes, other processes, such as *classical conditioning*, require at least a rudimentary cognitive ability on the part of the observer. For example, if an observer has previously perceived affective cues in others while experiencing that same affect (perhaps because both observer and target are simultaneously exposed to the same unpleasant stimulus), then the affective cues of targets may come to evoke that emotional state. This is precisely the process described by Spencer (1870), and it relies on the existence of quite elementary cognitive capacities—simply the ability to distinguish stimuli and be conditioned. A similar but more general version of this process, *direct association*, has also been proposed (Hoffman, 1984), and is more fully described in the next chapter. In addition, Eisenberg, Shea et al. (1991) identify a process of comparably modest sophistication, called *labelling*, in which the observer uses simple cues to infer something about the target's experience. For example, an observer may know that certain situations (like college graduations) usually produce happiness. Witnessing someone graduating may lead to the inference that the person is happy, regardless of other cues which may be present. This rather simple inference process therefore requires a fairly low level of cognitive sophistication.

Advanced Cognitive Processes

Finally, some processes require rather advanced kinds of cognitive activity. One example is what Hoffman refers to as *language-mediated association*, in which the observer's reaction to the target's plight is produced by activating language-based cognitive networks which trigger associations with the observer's own feelings or experiences. For example, a target who says "I've been laid off" may exhibit no obvious facial or vocal cues indicating distress, but an observer may respond empathically because personal relevant

memories are activated by the target's words. Such a process requires a more advanced level of cognitive sophistication than the processes previously discussed. Eisenberg, Shea et al. (1991) have described a very similar process, the use of *elaborated cognitive networks*, in which observers also employ target cues in order to access existing knowledge stores, and use this information to form inferences about the target.

The most advanced process, however, is what has been termed *role taking* or *perspective taking*: the attempts by one individual to understand another by imagining the other's perspective. It is typically an effortful process, involving both the suppression of one's own egocentric perspective on events and the active entertaining of someone else's. Earlier theorists who have argued for such a process include Smith, Mead, and Piaget, all of whom emphasized the importance of imagining others' perspectives. Among more recent approaches, Wispé's definition of empathy also seems to fit here.

When considering the terminology frequently used in this field, it seems clear that attempts to entertain the perspective of others, what we have described as an advanced cognitive process, constitutes a substantial part of what has often been referred to as "cognitive empathy." It is not, however, the only thing which has been included under that heading. It is important to re-emphasize that in the organizational model the term *role taking* refers specifically to the *process* in which one individual attempts to imagine the world of another. The *outcomes* of perspective taking, both affective and cognitive, are excluded from this definition. With all of this taken into account, the contemporary definitions of empathy which most closely correspond to role taking in this model come from Wispé (described earlier) and Hogan (1969, p. 308), for whom empathy "refers only to the act of constructing for oneself another person's mental state; the versimilitude of the resulting construct is not a necessary part of the concept's meaning."

Intrapersonal Outcomes

The third major construct within the organizational model is **intrapersonal outcomes**—the affective and non-affective responses of the observer that result from exposure to the target. In particular, these outcomes are thought to result primarily from the various processes identified at the previous stage in the model.

Affective Outcomes

This category consists of the emotional reactions experienced by an observer in response to the observed experiences of the target.

Worded in such a broad way, this definition can therefore encompass even Stotland's (1969) approach, which allows any sort of emotional reaction (even an opposite one) to another person to qualify as an empathic response. However, because most contemporary approaches employ much narrower definitions, affective outcomes are further subdivided into two forms: *parallel* and *reactive* outcomes.

A *parallel outcome* may in a sense be considered the prototypical affective response—an actual reproduction in an observer of the target's feelings. This sort of emotional matching is clearly the focus of several historical approaches. For example, Spencer's and McDougall's treatments of sympathy both emphasize observers coming to experience the same affect as that of the target. Smith's treatment does not focus quite as tightly on an exact match of emotion, but the experience of parallel affect quite clearly would be included within his definition of sympathy.

An interesting problem is posed by the cluster of recent definitions (e.g., Barnett, 1987; Eisenberg & Strayer, 1987; Gruen & Mendolsohn, 1986; Hoffman, 1984) which generally define empathy as an affective reaction which is congruent with, but not necessarily the same as, that of the target. Obviously such definitions would apply to those occasions when an empathic match occurs; an exact match does, after all, seem congruent with the observed emotion. Thus, when the affect of observer and target are closely matched, at least at the broadest level, these definitions would seem to fall under the heading of parallel outcomes. At other times, when observers experience affective reactions, such as sympathy, which go beyond those of the target, another way to conceptualize these responses is necessary.

Such a conceptualization is provided by *reactive outcomes*, defined as affective reactions to the experiences of others which differ from the observed affect. They are so named because they are empathic reactions to another's state rather than a simple reproduction of that state in the observer. Responses clearly falling into this category are the feelings of compassion for others referred to variously as sympathy (Wispé, 1986), empathy (Batson, 1991), and empathic concern (Davis, 1983b), and the empathic anger that observers may experience when witnessing someone being maltreated. In each case the observer's affect differs from the target's but is a direct reaction to that target's experiences. One additional affective response which has received recent attention is personal distress, the tendency to feel discomfort and anxiety in response to needy targets. As we shall see, it is difficult to categorize this affective state as purely parallel or reactive in nature. However, for reasons described in Chapter 6, we shall place it in the reactive outcome category.

A reactive outcome in many cases will result from more sophisticated cognitive processes than a parallel outcome. For example, a parallel affective response may result from fairly primitive motor mimicry and/or conditioning history. However, to experience an emotion or reactive affect different from the target in all probability requires some higher order processing to recognize and interpret the target's cues. Parallel outcomes will also tend to be more *self-centered* reactions (distress, for example), while reactive outcomes will tend to be more *other-oriented* (e.g., sympathy for another, or anger on another's behalf).

Non-Affective Outcomes

Not all outcomes resulting from exposure to others are affective in nature; some are primarily cognitive. One such outcome is *interpersonal accuracy*, the successful estimation of other people's thoughts, feelings, and characteristics. In general, such interpersonal judgments have been viewed as resulting to a considerable degree from cognitive role-taking processes (Dymond, 1950; Kerr & Speroff, 1954), a view which is consistent with the theoretical work of Mead and Piaget. More recently, empathy-related processes have also been implicated in affecting the *attributional judgments* offered by observers for targets' behavior (e.g., Regan & Totten, 1975; Gould & Sigall, 1977). In keeping with the process-outcome distinction outlined earlier, attributions for target behaviors and accurate judgments of others are classified as *outcomes*, and are clearly separated in this model from the *process* of role taking.

Interpersonal Outcomes

The final construct in the model consists of **interpersonal outcomes**, defined as behaviors directed toward a target which result from prior exposure to that target. The outcome which has attracted the most attention from empathy theorists and researchers is *helping behavior*. Both cognitive and affective facets of empathy have long been thought to contribute to the likelihood of observers offering help to needy targets. *Aggressive behavior* has also been linked theoretically to empathy-related processes and dispositions, with the expectation that empathy will be negatively associated with aggressive actions. The effect of empathy on behaviors that occur within *social relationships*, a topic which has only recently begun to attract consistent research interest, also falls into this category. As Figure 1.1 illustrates, interpersonal outcomes are viewed by the

organizational model as resulting most directly from cognitive and affective intrapersonal outcomes, and less directly by various empathy-related processes and antecedent conditions.

Advantages of the Organizational Model

Using the model as represented in Figure 1.1, it is possible to examine previous theoretical and empirical approaches to empathy in a slightly different light. For example, consider the early theorists who focused attention on “sympathy.” Smith, Spencer, and McDougall were all interested in essentially the same intrapersonal endpoint—the experience of parallel affective outcomes. That is, all three defined sympathy in terms of the observer coming to share the affect of the target. Interestingly, however, each of them proposed a different process by which this outcome was reached. McDougall’s innate, automatic “perceptual inlets” seem the epitome of a non-cognitive process; Spencer’s emphasis was clearly on simple associative learning processes; and Smith’s view that sympathy results from the power of imagination clearly implicates the most cognitively advanced mechanism.

Contemporary approaches also favor an affective definition of empathy, but a major concern of these approaches is drawing distinctions among the various affective reactions, especially regarding their implications for behaviors such as helping (e.g., Batson, 1991). The process most frequently considered in these approaches is cognitively advanced role taking, which is sometimes manipulated via instructional sets in an explicit effort to create specific affective reactions (e.g., Stotland, 1969; Toi & Batson, 1982). In this approach attention is also occasionally given to antecedent characteristics of the situation, for example, degree of similarity between target and observer, as influences on affective reactions (e.g., Krebs, 1975; Stotland, 1969). Non-affective outcomes are typically ignored by such approaches.

Theory and research taking a more cognitive view of empathy understandably focuses on different portions of the model: primarily the non-affective outcomes. The accuracy research of the 1940’s and 1950’s is one example of such a focus, although some of that research blurred the distinction between process and outcome. Another example is the spate of interest in the 1970’s concerning the effects of role-taking manipulations on observers’ attributions for a target’s behavior and outcomes (e.g., Regan & Totten, 1975). For the most part, however, cognitive perspectives on empathy have

paid little attention to either affective outcomes or to characteristics of the situation, tending instead to focus rather tightly on role-taking, non-affective outcomes, and the links between them.

The value of an approach such as Hoffman's (1984) is that it deals simultaneously with several elements of the model. For example, Hoffman argues that at very young ages there is a virtually automatic link between situational factors, such as strong distress cues in others, and the evocation of parallel distress responses, with few meaningful cognitive processes operating at all. With the development of role-taking capacity, however, more of the affective empathic experience is transformed into a reactive outcome such as empathic concern for the distressed other. Hoffman's approach therefore has a wider scope than most approaches, incorporating antecedent conditions, several different processes, and a variety of affective outcomes, and therefore attempts a more comprehensive explanation of the empathy domain.

A Multidimensional Approach to Empathy

The logic of the organizational model presented here, and the advantages afforded by models such as Hoffman's, point clearly toward one conclusion: the study of empathy is best served by adopting an explicitly multidimensional approach to the topic. As noted earlier, previous approaches have in general tended to identify a relatively small portion of the overall model, define that portion as the topic of interest, and then investigate it in a fairly focused way. With relatively few exceptions, then, this strategy has led to discrete, well-bounded bodies of information without much insight into the connections among empathy's various facets.

This has not gone completely unnoticed by those working in the field. For two decades the literature has seen periodic calls for more comprehensive approaches to empathy which would recognize its multifaceted nature (e.g., Davis, 1980, 1983b; Deutsch & Madle, 1975; Iannotti, 1975; Strayer, 1987). Some movement in this direction has in fact taken place. Hoffman's model is one example, and some of Eisenberg's (Eisenberg et al., 1991) work addresses this problem as well. At least one individual difference measure of empathy explicitly guided by such a view has also been developed and used (Davis, 1980; 1983b). Despite these examples, however, the dominant approach continues to be the separation of empathy into largely discrete areas of theoretical and research activity.

The approach taken in this book will be to examine the empirical work in a variety of empathy-related areas, clearly recognizing

the theoretical context(s) in which it was conducted. In addition, however, an effort will be made to interpret this work in terms of the organizational model presented here, with the goal of fitting the various pieces of the puzzle into a larger and more coherent picture. The next three chapters will deal with what the organizational model refers to as antecedents, focusing on the question of empathic capabilities and tendencies in particular. Chapters 5 and 6 will address both affective and non-affective intrapersonal outcomes, and include a discussion of various empathy-related processes. Chapters 7, 8, and 9 will separately examine the interpersonal outcomes of helping, aggression, and behaviors occurring within social relationships. The final chapter will offer a broader perspective on empathy theorizing and research, will evaluate the utility of the organizational model, and will offer suggestions for future work. The first step in this journey, however, is the question of origins: where does empathy, in all of its different facets, come from?

References

- Adelmann, P. K. , & Zajonc, R. B. (1989). Facial efference and the experience of emotion. *Annual Review of Psychology*, 40, 249-280.
- Aderman, D. (1972). Elation, depression, and helping behavior. *Journal of Personality and Social Psychology*, 24, 91-101.
- Aderman, D. , Brehm, S. S. , & Katz, L. B. (1974). Empathic observation of an innocent victim: The just world revisited. *Journal of Personality and Social Psychology*, 29, 342-347.
- Ainsworth, M. D. S. , Bell, S. M. V. , & Stayton, D. J. (1971). Individual differences in strange situation behavior of one-year-olds. In H. R. Schaffer (Ed.), *The origins of human social regions*, pp. 17-57. London: Academic Press.
- Ainsworth, M. D. S. , & Wittig, B. A. (1969). Attachment and exploratory behavior of one-year-olds in a strange situation. In B. M. Foss (Ed.), *Determinants of infant behavior*, (Vol. 4), pp. 113-136. New York: Barnes & Noble.
- Archer, R. L. , Foushee, H. C. , Davis, M. H. , and Aderman, D. (1979). Emotional empathy in a courtroom simulation: a person-situation interaction. *Journal of Applied Social Psychology*, 9, 275-291.
- Aron, A. , Aron, E. N. , Tudor, M. , & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, 60, 241-253.
- Aronfreed, J. (1970). The socialization of altruistic and sympathetic behavior: Some theoretical and experimental analyses. In L. M. Macauley & L. B. Berkowitz (Eds.), *Altruism and helping behavior: social psychological studies of some antecedents and consequences*, pp. 103-126. New York: Academic Press.
- Averill, J. R. (1982). *Anger and aggression: An essay on emotion*. New York: Springer-Verlag.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Barnett, M. A. (1987). Empathy and related responses in children. In N. E. Eisenberg & J. Strayer , (Eds.) *Empathy and its development*, pp. 146-162. Cambridge: Cambridge University Press.
- Barnett, M. A. , Howard, J. A. , King, L. M. , & Dino, G. A. (1980). Antecedents of empathy: Retrospective accounts of early socialization. *Personality and Social Psychology Bulletin*, 6, 361-365.
- Barnett, M. A. , King, L. M. , Howard, J. A. , & Dino, G. A. (1980). Empathy in young children: Relation to parents' empathy, affection, and emphasis on the feelings of others. *Developmental Psychology*, 16, 243-244.
- Baron, R. A. (1971a). Aggression as a function of magnitude of victim's pain cues, level of prior anger arousal, and aggressor-victim similarity. *Journal of Personality and Social Psychology*, 18, 48-54.
- Baron, R. A. (1971b). Magnitude of victim's pain cues and level of prior anger arousal as determinants of adult aggressive behavior. *Journal of Personality and Social Psychology*, 17, 236-243.
- Baron, R. A. (1974). Aggression as a function of victim's pain cues, level of prior anger arousal, and exposure to an aggressive model. *Journal of Personality and Social Psychology*, 29, 117-124.
- Baron, R. A. (1977). *Human aggression*. New York: Plenum Press.
- Baron, R. A. (1979). Effects of victim's pain cues, victim's race, and level of prior instigation upon physical aggression. *Journal of Applied Social Psychology*, 9, 103-114.

- Baron, R. A. , & Ransberger, V. M. (1978). Ambient temperature and the occurrence of collective violence: The "long hot summer" revisited. *Journal of Personality and Social Psychology*, 36, 351-360.
- Batson, C. D. (1987). Prosocial motivation: is it ever truly altruistic? In L. Berkowitz (Ed.), *Advances in experimental social psychology*, (Vol. 20), pp. 65-122. New York: Academic Press.
- Batson, C. D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Batson, C. D. , Batson, J. G. , Griffitt, C. A. , Barrientos, S. , Brandt, J. R. , Sprengelmeyer, P. , & Bayly, M. J. (1989). Negative-state relief and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 56, 922-933.
- Batson, C. D. , Batson J. G., Slingsby, J. K. , Harrell, K. L. , Peekna, H. M. , & Todd, R. M. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 61, 413-426.
- Batson, C. D. , Bolen, M. H. , Cross, J. A. , & Neuringer-Benefiel, H. (1986). Where is the altruism in the altruistic personality? *Journal of Personality and Social Psychology*, 50, 212-220.
- Batson, C. D. , Duncan, B. D. , Ackerman, P. , Buckley, T. , & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, 40, 290-302.
- Batson, C. D. , Dyck, J. L. , Brandt, J. R. , Batson, J. G. , Powell, A. L. , McMaster, M. R. , & Griffitt, C. (1988). Five studies testing two new egoistic alternatives to the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 55, 52-77.
- Batson, C. D. , Fultz, J. , & Schoenrade, P. A. (1987). Distress and empathy: Two qualitatively distinct vicarious emotions with different motivational consequences. *Journal of Personality*, 55, 19-39.
- Batson, C. D. , O'Quin, K. , Fultz, J. , Vanderplas, M. , & Isen, A. M. (1983). Influence of self-reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology*, 45, 706-718.
- Bavelas, J. B. , Black, A. , Lemery, C. R. , MacInnis, S. , & Mullett, J. (1986). Experimental methods of studying "elementary motor mimicry." *Journal of Nonverbal Behavior*, 10, 102-119.
- Bavelas, J. B. , Black, A. , Lemery, C. R. , & Mullett, J. (1986). "I show how you feel": Motor mimicry as a communicative act. *Journal of Personality and Social Psychology*, 50, 322-329.
- Bavelas, J. B. , Black, A. , Lemery, C. R. , & Mullett, J. (1987). Motor mimicry as primitive empathy. In N. E. Eisenberg & J. S. Strayer (Eds.), *Empathy and its development*, pp. 317-338. Cambridge: Cambridge University Press.
- Baylis, G. C. , Rolls, E. T. , & Leonard, C. M. (1985). Selectivity between faces in the responses of a population of neurons in the cortex in the superior temporal sulcus of the monkey. *Brain Research*, 342, 91-102.
- Berkowitz, L. (1962). *Aggression: A social psychological analysis*. New York: McGraw-Hill.
- Berkowitz, L. (1969). Resistance to improper dependency relationships. *Journal of Experimental Social Psychology*, 5, 283-294.
- Berkowitz, L. (1978). Whatever happened to the frustration-aggression hypothesis? *American Behavioral Scientist*, 21, 691-708.
- Berkowitz, L. (1982). Aversive conditions as stimuli to aggression. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 15), pp. 249-288. New York: Academic Press.

- Berkowitz, L. (1984). Some effects of thoughts on anti- and pro-social influences of media events: A cognitive neo-association analysis. *Psychological Bulletin*, 95, 410-427.
- Berkowitz, L. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106, 59-73.
- Bernstein, W. M. , & Davis, M. H. (1982). Perspective-taking, self-consciousness, and accuracy in person perception. *Basic and Applied Social Psychology*, 3, 1-19.
- Bernstein, W. M. , McGuire, T. V. , Raskin, P. M. , Ganzach, Y. , & Thiry, C. P. (1988). Perspective taking increases both differential and stereotypic accuracy. Unpublished manuscript.
- Berscheid, E. (1983). Emotion. In H.H. Kelley , E. Berscheid , A. Christensen , J. H. Harvey , T. L. Huston , G. Levinger , E. McClintock , L. A. Peplau , & D. R. Peterson (Eds.) *Close Relationships*, pp. 110-168. New York: W. H. F. Freeman and Co.
- Betancourt, H. (1990a). An attribution-empathy model of helping behavior: Behavioral intentions and judgments of help-giving. *Personality and Social Psychology Bulletin*, 16, 573-591.
- Betancourt, H. (1990b). An attributional approach to intergroup and international conflict. S. G. Graham & V. F. Folkes (Eds.), *Attribution theory: Applications to achievement, mental health, and interpersonal conflict*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Betancourt, H. , & Blair, I. (1992). A cognition (attribution)-emotion model of violence in conflict situations. *Personality and Social Psychology Bulletin*, 18, 343-350.
- Block, J. (1961). *The Q-sort method in personality assessment and psychiatric research*. Springfield, IL: Charles C. Thomas.
- Block, J. H. (1976). Assessing sex differences: Issues, problems, and pitfalls. *Merrill-Palmer Quarterly*, 22, 283-308.
- Borke, H. (1971). Interpersonal perception of young children: Egocentrism or empathy? *Developmental Psychology*, 5, 263-269.
- Borke, H. (1973). The development of empathy in Chinese and American children between three and six years of age: A cross-culture study. *Developmental Psychology*, 9, 102-108.
- Borman, W. C. (1977). Consistency of rating accuracy and rating errors in the judgement of human performance. *Organizational Behavior and Human Performance*, 20, 238-252.
- Borman, W. C. (1979). Individual differences correlates of accuracy in evaluating others' performance effectiveness. *Applied Psychological Measurement*, 3, 103-115.
- Bradbury, T. N. & Fincham, F. D. (1987). Affect and cognition in close relationships: Towards an integrative model. *Cognition and Emotion*, 1, 59-87.
- Bradbury, T. N. , & Fincham, F. D. (1988). Individual difference variables in close relationships: A contextual model of marriage as an integrative framework. *Journal of Personality and Social Psychology*, 54, 1-9.
- Bradbury, T. N. , & Fincham, F. D. (1990). Attributions in marriage: Review and critique. *Psychological Bulletin*, 107, 3-33.
- Brehm, S. S. , & Aderman, D. (1977). On the relationship between empathy and the actor versus observer hypothesis. *Journal of Research in Personality*, 11, 340-346.
- Brehm, S. S. , Fletcher, B. L. , & West, V. (1981). Effects of empathy instructions on first-grader's liking of other people. *Child Study Journal*, 11, 1-15.

- Brehm, S. S. , Powell, L. K. , & Coke, J. S. (1984). The effects of empathic instructions upon donating behavior: Sex differences in young children. *Sex Roles*, 10, 405-416.
- Brothers, L. (1989). A biological perspective on empathy. *American Journal of Psychiatry*, 146, 10-19.
- Bruch, M. A. , Kaflowitz, N. G. , & Pearl, L. (1988). Mediated and nonmediated relationships of personality components to loneliness. *Journal of Social and Clinical Psychology*, 6, 346-355.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development*, 53, 413-425.
- Buck, R. (1980). Nonverbal behavior and the theory of emotion: the facial feedback hypothesis. *Journal of Personality and Social Psychology*, 38, 811-824.
- Buss, A. H. (1966a). The effect of harm on subsequent aggression. *Journal of Experimental Research in Personality*, 1, 249-255.
- Buss, A. H. (1966b). Instrumentality of aggression, feedback, and frustration as determinants of physical aggression. *Journal of Personality and Social Psychology*, 3, 153-162.
- Buss, A. H. , & Durkee, M. (1957). An inventory for assessing different kinds of hostility. *Journal of Consulting Psychology*, 21, 343-348.
- Buss, A. H. , & Plomin, R. (1975). A temperament theory of personality development. New York: John Wiley & Sons.
- Caplan, A. L. (1980). A critical examination of current sociobiological theory: Adequacy and implications. In G. W. Barlow & J. S. Silverberg (Eds.), *Sociobiology: Beyond nature/nurture?*, pp. 97-121. Boulder, CO: Westview Press, Inc.
- Campos, J. J. , Barrett, K. C. , Lamb, M. E. , Goldsmith, H. H. , & Stenberg, C. (1983). Socioemotional development. In P. Mussen (Ed.), *Handbook of Child Psychology*, 4th ed. (Vol. II), pp. 784-915. New York: John Wiley & Sons.
- Carlo, G. Eisenberg , N., Troyer, D. , Switzer, G. , & Speer, A. L. (1991). The altruistic personality: In what contexts is it apparent? *Journal of Personality and Social Psychology*, 61, 450-458.
- Carlson, M. , & Miller, N. (1987). Explanation of the relation between negative mood and helping. *Psychological Bulletin*, 102, 91-108.
- Chandler, M. J. (1973). Egocentrism and antisocial behavior: The assessment and training of social perspective-taking skills. *Developmental Psychology*, 9, 326-332.
- Chandler, M. J. , & Greenspan, S. (1972). Ersatz egocentrism: A reply to H. Borke. *Developmental Psychology*, 7, 104-106.
- Chapín, F. S. (1942). Preliminary standardization of a social insight scale. *American Sociological Review*, 7, 214-225.
- Chlopan, B. E. , McCain, M. L. , Carbonell, J. L. , & Hagen, R. L. (1985). Empathy: Review of available measures. *Journal of Personality and Social Psychology*, 48, 635-653.
- Cialdini, R. B. , Baumann, D. J. , & Kenrick, D. T. (1981). Insights from sadness: A three-step model of the development of altruism as hedonism. *Developmental Review*, 1, 207-223.
- Cialdini, R. B. , Darby, B. L. , & Vincent, J. E. (1973). Transgression and altruism: A case for hedonism. *Journal of Experimental Social Psychology*, 9, 502-516.
- Cialdini, R. B. , & Kenrick, D. T. (1976). Altruism as hedonism: A social development perspective on the relationship of negative mood state and

helping. *Journal of Personality and Social Psychology*, 34, 907-914.

Cialdini, R. B. , Schaller, M. , Houlihan, D. , Arps, K. , Fultz, J. , & Beaman, A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of Personality and Social Psychology*, 52, 749-758.

Clary, E. G. , & Orenstein, L. (1991). The amount and effectiveness of help: The relationship of motives and abilities to helping behavior. *Personality and Social Psychology Bulletin*, 17, 58-64.

Clary, E. G. , & Snyder, M. (1991). A functional analysis of altruism and prosocial behavior: The case of volunteerism. In M. S. Clark (Ed.), *Review of personality and social psychology: prosocial behavior*, (Vol. 12), pp. 119-148. Newbury Park, CA: Sage.

Coke, J. S. , Batson, C. D. , & McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology*, 36, 752-766.

Comte, I. A. (1851/1875). *System of positive polity* (Vol. I). London: Longmans, Green & Co.

Cook, W. W. , & Medley, D. M. (1954). Proposed hostility and pharisaic-virtue scales for the MMPI. *The Journal of Applied Psychology*, 38, 414-418.

Costa, P. T., Jr. , & McCrae, R. R. (1985). *The NEO Personality Inventory manual*. Odessa, FL: Psychological Assessment Resources.

Cronbach, L. J. (1955). Processes affecting scores on understanding of others and assuming "similarity." *Psychological Bulletin*, 52, 177-193.

Cross, D. G. , & Sharpley, C. F. (1982). Measurement of empathy with the Hogan empathy scale. *Psychological Reports*, 50, 62.

Darwin, C. (1859/1966). *On the origin of species*. Cambridge, MA: Harvard University Press.

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85.

Davis, M. H. (1983a). The effects of dispositional empathy on emotional reactions and helping: A multidimensional approach. *Journal of Personality*, 51, 167-184.

Davis, M. H. (1983b). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113-126.

Davis, M. H. (1992). [Dispositional empathy, dispositional hostility, and the Big Five personality dimensions]. Unpublished raw data.

Davis, M. H. , & Franzoi, S. L. (1986). Adolescent loneliness, self-disclosure, and private self-consciousness: a longitudinal investigation. *Journal of Personality and Social Psychology*, 51, 595-608.

Davis, M. H. , & Franzoi, S. L. (1991). Stability and change in adolescent self-consciousness and empathy. *Journal of Research in Personality*, 25, 70-87.

Davis, M. H. , Franzoi, S. L. , & Wellinger, P. (1985). Personality, social behavior, and loneliness. Presented at the 93rd annual convention of the American Psychological Association, Los Angeles.

Davis, M. H. , Hull, J. G. , Young, R. D. , & Warren, G. G. (1987). Emotional reactions to dramatic film stimuli: The influence of cognitive and emotional empathy. *Journal of Personality and Social Psychology*, 52, 126-133.

Davis, M. H. , & Kraus, L. A. (1991). Dispositional empathy and social relationships. In W. H. Jones & D. P. Perlman (Eds.), *Advances in Personal Relationships* (Vol. 3), pp. 75-115. London: Jessica Kingsley Publishers.

- Davis, M. H. , Luce, C. , & Kraus, S. J. (in press). The heritability of dispositional empathy. *Journal of Personality*.
- Davis, M. H. , & Oathout, H. A. (1987). Maintenance of satisfaction in romantic relationships: Empathy and relational competence. *Journal of Personality and Social Psychology*, 53, 397-10.
- Davis, M. H. , & Oathout, H. A. (1992). The effect of dispositional empathy on romantic relationship behaviors: Heterosocial anxiety as a moderating influence. *Personality and Social Psychology Bulletin*, 18, 76-83.
- Davis, M. H. , Salomon, K. , Hoefer, P. , & Dufresne, D. (1990). The effects of perspective taking on schemata: Encoding self- and other-relevant information. Unpublished manuscript.
- Dawkins, R. (1976). *The selfish gene*. Oxford: Oxford University Press.
- Deardorff, P. A. , Finch, A. J. , Kendall, P. C. , Lira, F. , & Indrisano, V. (1975). Empathy and socialization in repeat offenders, first offenders, and normals. *Journal of Counseling Psychology*, 22, 453-455.
- Deutsch, F. M. , & Mackesy, M. E. (1985). Friendship and the development of self-schemas: The effects of talking about others. *Personality and Social Psychology Bulletin*, 11, 399-08.
- Deutsch, F. M. , & Madle, R. A. (1975). Empathy: Historic and current conceptualizations, measurement, and a cognitive theoretical perspective. *Human Development*, 18, 267-287.
- de Waal, F. (1982). *Chimpanzee politics*. London: Jonathan Cape.
- Glugokinski, E. L. , & Firestone, I. J. (1974). Other centeredness and susceptibility to charitable appeals: Effects of perceived discipline. *Developmental Psychology*, 10, 21-28.
- Dollard, J. , Doob, L. , Miller, N. , Mowrer, O. , & Sears, R. (1939). *Frustration and aggression*. New Haven: Yale University Press.
- Dollinger, S. J. , & Riger, A. L. (1984). On penetrating the "mask": The role of sagacity and acumen in a word-association/clinical-judgment task. *Journal of Personality and Social Psychology*, 46, 145-152.
- Dovidio, J. F. , Allen, J. L. , & Schroeder, D. A. (1990). Specificity of empathy-induced helping: Evidence for altruistic motivation. *Journal of Personality and Social Psychology*, 59, 249-260.
- Dunn, J. , Brown, J. , & Beardsall, L. (1991). Family talk about feeling states and children's later understanding of others' emotions. *Developmental Psychology*, 27, 448-455.
- Dyck, R. J. , & Rule, B. G. (1978). Effect on retaliation of causal attributions concerning attack. *Journal of Personality and Social Psychology*, 36, 521-529.
- Dymond, R. F. (1948). A preliminary investigation of the relation of insight and empathy. *Journal of Consulting Psychology*, 12, 228-233.
- Dymond, R. F. (1949). A scale for the measurement of empathic ability. *Journal of Consulting Psychology*, 13, 127-133.
- Dymond, R. F. (1950). Personality and empathy. *Journal of Consulting Psychology*, 14, 343-350.
- Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Eisenberg, N. , & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, 14, 131-149.
- Eisenberg, N. , Fabes, R. A. , Bustamante, D. , Mathy, R. M. , Miller, P. A. , & Lindholm, E. (1988). Differentiation of vicariously induced emotional reactions in children. *Developmental Psychology*, 24, 237-246.

- Eisenberg, N. , Fabes, R. A. , Carlo, G. , Speer, A. L. , Switzer, G. , Karbon, M. & Troyer, D. (1993). The relations of empathy-related emotions and maternal practices to children's comforting behavior. *Journal of Experimental Child Psychology*, ss, 131-150.
- Eisenberg, N. , Fabes, R. A. , Carlo, G. , Troyer, D. , Speer, A. L. , Karbon, M. , & Switzer, G. (1992). The relations of maternal practices and characteristics to children's vicarious emotional responsiveness. *Child Development*, 63, 583-602.
- Eisenberg, N. , Fabes, R. A. , Miller, P. A. , Fultz, J. , Shell, R. , Mathy, R. M. , & Reno, R. R. (1989). Relation of sympathy and personal distress to prosocial behavior: A multimethod study. *Journal of Personality and Social Psychology*, 57, 55-66.
- Eisenberg, N. , Fabes, R. A. , Schaller, M. , Carlo, G. , & Miller, P. (1991). The relations of parental characteristics and practices to children's vicarious emotional responding. *Child Development*, 62, 1393-1408.
- Eisenberg, N. , Fabes, R. A. , Schaller, M. , Miller, P. , Carlo, G. , Poulin, R. Shea, C, & Shell, R. (1991). Personality and socialization correlates of vicarious emotional responding. *Journal of Personality and Social Psychology*, 61, 459-470.
- Eisenberg, N. , & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, 94, 100-131.
- Eisenberg, N. , & Miller, P. A. (1987). Empathy and prosocial behavior. *Psychological Bulletin*, 101, 91-119.
- Eisenberg, N. , Miller, P. A. , Schaller, M. , Fabes, R. A. , Fultz, J. , Shell, R. , & Shea, C. L. (1989). The role of sympathy and altruistic personality traits in helping: A reexamination. *Journal of Personality*, 57, 41-67.
- Eisenberg, N. , & Mussen, P. H. (1989). *The roots of prosocial behavior in children*. Cambridge: Cambridge University Press.
- Eisenberg, Schaller , M., Fabes, R. A. , Bustamante, D. , Mathy, R. M. , Shell, R. , & Rhodes, K. (1988). Differentiation of personal distress and sympathy in children and adults. *Developmental Psychology*, 24, 766-775.
- Eisenberg, N. , Shea, C. L. , Carlo, G. , & Knight, G. P. (1991). Empathy-related responding and cognition: a "chicken and the egg" dilemma. In W. K. Kurtines & J. G. Gewirtz (Eds.), *Handbook of moral behavior and development*. Volume 2: Research, pp. 63-88. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Eisenberg, N. , & Strayer, J. (1987). Critical issues in the study of empathy. In N. E. Eisenberg & J. S. Strayer (Eds.), *Empathy and its development*, pp. 3-13. Cambridge: Cambridge University Press.
- Eisenberg-Berg, N. , & Lennon, R. (1980). Altruism and the assessment of empathy in the preschool years. *Child Development*, 51, 552-557.
- Eisenberg-Berg, N. , & Mussen, P. (1978). Empathy and moral development in adolescence. *Developmental Psychology*, 14, 185-186.
- Ekman, P. , Liebert, R. M. , Friesen, W. V. , Harrison, R. , Zlatchin , C, Malmstrom, E. J. , & Baron, R. A. (1972). Facial expressions of emotion while watching televised violence as predictors of subsequent aggression. In G. A. Comstock , E. A. Rubinstein , & J. P. Murray (Eds.), *Television and Social Behavior: Reports and Papers (Vol. V)*, pp. 22-58. Washington, DC: U.S. Government Printing Office.
- Elias, H. (1980). The effect of empathy, reactivity, and anxiety on interpersonal aggression intensity. *Polish Psychological Bulletin*, 11, 169-178.
- Ellis, P.L. (1982). Empathy: A factor in antisocial behavior. *Journal of Abnormal Child Psychology*, 10, 123-134.

Englis, B. G. , Vaughan, K. B. , & Lanzetta, J. T. (1982). Conditioning of counter-empathetic emotional responses. *Journal of Experimental Social Psychology*, 18, 375-391.

Enright, R. D. , & Lapsley, D. K. (1980). Social role-taking: A review of the constructs, measures, and measurement properties. *Review of Educational Research*, 50, 647-674.

Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL: Charles C. Thomas.

Eysenck, H. J. , & Eysenck, M. W. (1985). *Personality and individual differences: A natural science approach*. New York: Plenum Press.

Eysenck, S. B. G. , & Eysenck, H. J. (1978). Impulsiveness and venturesomeness: Their position in a dimensional system of personality description. *Psychological Reports*, 43, 1247-1255.

Eysenck, S. B. G. , & McGurk, B. J. (1980). Impulsiveness and venturesomeness in a detention center population. *Psychological Reports*, 47, 1299-1306.

Fabes, R. A. , Eisenberg, N. , & Miller, P. A. (1990). Maternal correlates of children's vicarious emotional responsiveness. *Developmental Psychology*, 26, 639-648.

Feffer, M. H. , & Gourevitch, V. (1960). Cognitive aspects of role-taking in children. *Journal of Personality*, 28, 383-396.

Feffer, M. & Suchotliff, L. (1966). Decentering implications of social interactions. *Journal of Personality and Social Psychology*, 4, 415-422.

Ferguson, T. J. , & Rule, B. G. (1983). An attributional perspective on anger and aggression. In R. G. Geen & E. I. Donnerstein (Eds.), *Aggression: theoretical and empirical reviews* (Vol. 1), pp. 41-74. New York: Academic Press.

Feshbach, N. D. (1978). Studies of empathic behavior in children. In B. A. Maher (Ed.), *Progress in experimental personality research* (Vol. 8), pp. 1-47. New York: Academic Press.

Feshbach, N. D. , & Feshbach, S. (1969). The relationship between empathy and aggression in two age groups. *Developmental Psychology*, 1, 102-107.

Feshbach, N. D. , & Roe, K. (1968). Empathy in six- and seven-year-olds. *Child Development*, 39, 133-145.

Feshbach, S. (1964). The function of aggression and the regulation of aggressive drive. *Psychological Review*, 71, 257-272.

Feshbach, S. , Stiles, W. B. , & Bitter, E. (1967). The reinforcing effect of witnessing aggression. *Journal of Experimental Research in Personality*, 2, 133-139.

Fincham, F. D. , & Bradbury, T. N. (1987). The impact of attributions in marriage: A longitudinal analysis. *Journal of Personality and Social Psychology*, 53, 510-517.

Fincham, F. D. , & Bradbury, T. N. (1988). The impact of attributions in marriage: Empirical and conceptual foundations. *British Journal of Clinical Psychology*, 27, 77-90.

Fincham, F. D. , & Bradbury, T. N. (1989a). The impact of attributions in marriage: An individual difference analysis. *Journal of Social and Personal Relationships*, 6, 69-85.

Fincham, F. D. , & Bradbury, T. N. (1989b). Perceived responsibility for marital events: Egocentric or partner-centric bias? *Journal of Marriage and the Family*, 51, 27-35.

- Fincham, F. D. , Bradbury, T. N. , & Grych, J. H. (1990). Conflict in close relationships: The role of intrapersonal phenomena. In S. G. Graham & V. F. Folkes (Eds.), *Attribution theory: Applications to achievement, mental health, and interpersonal conflict*, pp. 161-184. Hillsdale, N J: Lawrence Erlbaum Associates.
- Fiske, S. T. , & Taylor, S. E. (1991). *Social Cognition*, 2nd ed. New York: McGraw-Hill.
- Flavell, J. H. , Botkin, P. T. , Fry, C. L. , Wright, J. , & Jarvis, P. (1968). *The development of role taking and communication skills in children*. New York: Wiley.
- Ford, M. E. (1979). The construct validity of egocentrism. *Psychological Bulletin*, 86, 1169-1188.
- Franzoi, S.L. , & Davis, M. H. (1985). Adolescent self-disclosure and loneliness: Private self-consciousness and parental influences. *Journal of Personality and Social Psychology*, 48, 768-780.
- Franzoi, S. L. , Davis, M. H. , & Young, R. D. (1985). The effects of private self-consciousness and perspective taking on satisfaction in close relationships. *Journal of Personality and Social Psychology*, 48, 1584-1594.
- Freedman, J. L. (1970). Transgression, compliance, and guilt. In J. R. Macaulay & L. B. Berkowitz (Eds.), *Altruism and helping behavior*, pp. 155-161. New York: Academic Press.
- Fultz, J. , Batson, C. D. , Fortenbach, V. A. , McCarthy, P. M. , & Varney, L. L. (1986). Social evaluation and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 50, 761-769.
- Fultz, J. , & Cialdini, R. B. (1986). Focus of attention, sadness, and the empathy-helping relationship: Evidence for a negative-state relief explanation. Presented at the 94th Annual Convention of the American Psychological Association, Washington, DC.
- Funder, D. C. (1987). Errors and mistakes: Evaluating the accuracy of social judgment. *Psychological Bulletin*, 101, 75-90.
- Funder, D. C. , & Harris, M. J. (1986). On the several facets of personality assessment: The case of social acuity. *Journal of Personality*, 54, 528-550.
- Gaertner, S. L. , & Dovidio, J. F. (1977). The subtlety of white racism, arousal, and helping behavior. *Journal of Personality and Social Psychology*, 35, 691-707.
- Gaertner, S. L. , Dovidio, J. F. , & Johnson, G. (1979). Race of victim, nonresponsive bystanders, and helping behavior. Paper presented at the 87th Annual Convention of the American Psychological Association, New York.
- Gage, N. L. , & Cronbach, L. J. (1955). Conceptual methodological problems in interpersonal perception. *Psychological Review*, 62, 411-422.
- Gage, N. L. , Leavitt, G. S. , & Stone, G. C. (1956). The intermediary key in the analysis of interpersonal perception. *Psychological Bulletin*, 53, 258-266.
- Galper, R. E. (1976). Turning observers into actors: Differential causal attributions as a function of "empathy." *Journal of Research in Personality*, 10, 328-335.
- Geen, R. G. (1970). Perceived suffering of the victim as an inhibitor of attack-induced aggression. *The Journal of Social Psychology*, 81, 209-215.
- Gergen, K. , Gergen, M. , & Meter, K. (1972). Individual orientations to prosocial behavior. *Journal of Social Issues*, 8, 105-130.
- Glucksberg, S. , Krauss, R. M. , & Weisberg, R. (1966). Referential communication in nursery school children: Method and some preliminary findings. *Journal of Experimental Child Psychology*, 3, 333-342.

Goldsmith, H. H. (1983). Genetic influence on personality from infancy to adulthood. *Child Development*, 54, 331-355.

Gough, H. G. (1987). *California Psychological Inventory: Administrator's guide*. Palo Alto, CA: Consulting Psychologists Press.

Gough, H. G. , & Heilbrun, A. L. (1980). *The Adjective Check List Manual* Palo Alto, CA: Consulting Psychologists Press.

Gould, R. , & Sigall, H. (1977). The effects of empathy and outcome on attribution: An examination of the divergent-perspectives hypothesis. *Journal of Experimental Social Psychology*, 13, 480-491.

Gould, S. J. (1980). Sociobiology and the theory of natural selection. In G. W. Barlow & J. S. Silverberg (Eds.), *Sociobiology: Beyond nature/nurture?*, pp. 257-269. Boulder, CO: Westview Press, Inc.

Greenwell, J. , & Dengerink, H. A. (1973). The role of perceived versus actual attack in human physical aggression. *Journal of Personality and Social Psychology*, 26, 66-71.

Greif, E. B. , & Hogan, R. (1973). The theory and measurement of empathy. *Journal of Counseling Psychology*, 20, 280-284.

Gruen, R. J. , & Mendelsohn, G. (1986). Emotional responses to affective displays in others: The distinction between empathy and sympathy. *Journal of Personality and Social Psychology*, 51, 609-614.

Hall, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin*, 85, 845-858.

Hall, J. A. (1979). Gender, gender roles, and nonverbal communication skills. In R. Rosenthal (Ed.), *Skill in Nonverbal Communication*, pp. 32-67. Cambridge, MA: Oelgeschlager, Gunn & Hain, Publishers.

Hamilton, W. D. (1964). The genetic evolution of social behavior. *Journal of Theoretical Biology*, 7, 1-51.

Hart, A. J. , & Rosenthal, R. (1988). Improving sensitivity to nonverbal communication. Unpublished manuscript.

Hartshorne, H. , & May, M. A. (1928). *Studies in the nature of character: Studies in deceit* (Vol. 1). New York: Macmillan.

Hartshorne, H. , May, M. A. , & Mailer, J. B. (1929). *Studies in the nature of character: Studies in self-control* (Vol. II). New York: Macmillan.

Hartshorne, H. , May, M. A. , & Shuttleworth, F. K. (1930). *Studies in the nature of character: Studies in the organization of character* (Vol. III). New York: Macmillan.

Hastorf, A. H. , & Bender, I. E. (1952). A caution respecting the measurement of empathic ability. *Journal of Abnormal and Social Psychology*, 47, 574-576.

Hendrick, C. , & Taylor, S. P. (1971). Effects of belief similarity and aggression on attraction and counteraggression. *Journal of Personality and Social Psychology*, 17, 342-349.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319-340.

Higgins, E. T. , Feldman, N. S. , & Ruble, D. N. (1980). Accuracy and differentiation in social prediction: A developmental perspective. *Journal of Personality*, 48, 520-540.

Hill, C. A. (1991). Seeking emotional support: The influence of affiliative need and partner warmth. *Journal of Personality and Social Psychology*, 60, 112-121.

Hinchey, F. S. , & Gavelek, J. R. (1982). Empathic responding in children of battered mothers. *Child Abuse and Neglect*, 6, 395-401.

- Hobbes, T. (1651). *Leviathan: Or the matter, form, and power of a commonwealth, ecclesiastical and civil*. London: A. Crooke.
- Hoffman, M. L. (1975). Altruistic behavior and the parent-child relationship. *Journal of Personality and Social Psychology*, 31, 937-943.
- Hoffman, M. L. (1977). Sex differences in empathy and related behaviors. *Psychological Bulletin*, 84, 712-722.
- Hoffman, M. L. (1978). Psychological and biological perspectives on altruism. *International Journal of Behavioral Development*, 1, 323-339.
- Hoffman, M. L. (1982a). Development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), *The development of prosocial behavior*, pp. 281-313. New York: Academic Press.
- Hoffman, M. L. (1982b). The measurement of empathy. In C. E. Izard (Ed.), *Measuring emotions in infants and children*, pp. 279-296. Cambridge: Cambridge University Press.
- Hoffman, M. L. (1984). Interaction of affect and cognition in empathy. In C. E. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognition, and behavior*, pp. 103-131. Cambridge: Cambridge University Press.
- Hoffman, M. L. (1987). The contribution of empathy to justice and moral judgment. In N. E. Eisenberg & J. S. Strayer (Eds.), *Empathy and its development*, pp. 47-80. Cambridge: Cambridge University Press.
- Hoffman, M. L., & Saltzstein, H. D. (1967). Parent discipline and the child's moral development. *Journal of Personality and Social Psychology*, 5, 45-57.
- Hogan, R. (1969). Development of an empathy scale. *Journal of Consulting and Clinical Psychology*, 33, 307-316.
- Hogan, R. (1983). A socioanalytic theory of personality. In M. Page (Ed.), *Nebraska Symposium on Motivation*, pp. 55-89. Lincoln: University of Nebraska Press.
- Hornstein, H. A. (1991). Empathic distress and altruism: Still inseparable. *Psychological Inquiry*, 2, 133-135.
- Houston, D. A. (1990). Empathy and the self: Cognitive and emotional influences on the evaluation of negative affect in others. *Journal of Personality and Social Psychology*, 59, 859-868.
- Howe, G. W. (1987). Attributions of complex cause and the perception of marital conflict. *Journal of Personality and Social Psychology*, 53, 1119-1128.
- Howe, N., & Ross, H. S. (1990). Socialization, perspective-taking, and the sibling relationship. *Developmental Psychology*, 26, 160-165.
- Hume, D. (1739/1968). *A treatise of human nature*, 3rd. ed. H.A. Selby-Bigge (Ed.). Oxford: Clarendon Press.
- Humphrey, N. K. (1976). The social function of intellect. In P. P. G. Bateson & R. A. Hinde (Eds.), *Growing points in ethology*, pp. 303-317. Cambridge: Cambridge University Press.
- Iannotti, R. J. (1975). The nature and measurement of empathy in children. *The Counseling Psychologist*, 5, 21-24.
- Ickes, W. (in press). Empathic accuracy. *Journal of Personality*.
- Ickes, W., & Kidd, R. F. (1976). An attributional analysis of helping behavior. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.) *New directions in attribution research*, (Vol. 1), pp. 311-334. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ickes, W., Sanson, L., Bissonnette, V., & Garcia, S. (1990). Naturalistic social cognition: Empathic accuracy in mixed-sex dyads. *Journal of Personality and Social Psychology*, 49, 730-742.

Isen, A. M. (1970). Success, failure, attention and reaction to others: the warm glow of success. *Journal of Personality and Social Psychology*, 15, 294-301.

Isen, A. M. , Shalker, T. E. , Clark, M. , & Karp, L. (1978). Affect accessibility of material in memory and behavior: A cognitive loop? *Journal of Personality and Social Psychology*, 36, 1-12.

Izard, D. E. (1977). *Human emotions*. New York: Plenum.

Jackson, D. N. (1974). *Personality Research Form manual*, 2nd ed. Port Huron, MI: Research Psychologists Press.

Johnson, J. A. , Cheek, J. M. , & Smither, R. (1983). The structure of empathy. *Journal of Personality and Social Psychology*, 45, 1299-1312.

Johnson, T. E. , & Rule, B. G. (1986). Mitigating circumstance information, censure, and aggression. *Journal of Personality and Social Psychology*, 50, 537-542.

Jones, E. E. , & Nisbett R. E. (1971). *The actor and the observer: Divergent perceptions of the causes of behavior*. Morristown, NJ: General Learning Press.

Jurkovic, G. J. , & Prentice, N. M. (1977). Relation of moral and cognitive development of dimensions of juvenile delinquency. *Journal of Abnormal Psychology*, 80, 414-420.

Kalliopuska, M. (1984). Relation between children's and parents' empathy. *Psychological Reports*, 54, 295-299.

Kaplan, P. J. , & Arbuthnot, J. (1985). Affective empathy and cognitive role-taking in delinquent and nondelinquent youth. *Adolescence*, 20, 323-333.

Kendall, P. C. , Deardorff, P. A. , & Finch, A. J., Jr. (1977). Empathy and socialization in first and repeat juvenile offenders and normals. *Journal of Abnormal Child Psychology*, 5, 93-97.

Kenny, D. A. , & Albright, L. (1987). Accuracy in interpersonal perception: A social relations analysis. *Psychological Bulletin*, 102, 390-402.

Kenrick, D. T. , Baumann, D. J. , & Cialdini, R. B. (1979). A step in the socialization of altruism as hedonism: Effects of negative mood on children's generosity under public and private conditions. *Journal of Personality and Social Psychology*, 37, 747-755.

Kerr, W. A. , & Speroff, B. G. (1954). Validation and evaluation of the empathy test. *Journal of General Psychology*, 50, 369-376.

Kestenbaum, R. , Farber, E. A. , & Sroufe, L. A. (1989). Individual differences in empathy among preschoolers: Relation to attachment history. *New Directions for Child Development* 44, 51-64.

Koestner, R. , Franz, C. , & Weinberger, J. (1990). The family origins of empathic concern: A 26-year longitudinal study. *Journal of Personality and Social Psychology*, 58, 709-717.

Kohler, W. (1929). *Gestalt psychology*. New York: Liveright.

Krebs, D. L. (1970). Altruism: an examination of the concept and a review of the literature. *Psychological Bulletin*, 73, 258-302.

Krebs, D. L. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, 32, 1134-1146.

Krebs, D. L. (1978). A cognitive-developmental approach to altruism. In L. Wisse (Ed.), *Altruism, sympathy, and helping: Psychological and sociological principles*, pp. 141-164. New York: Academic Press.

Krebs, D. L. (1983). Commentary and critique: sociobiological approaches to prosocial development. In D. L. Bridgeman (Ed.), *The nature of prosocial development: Interdisciplinary theories and strategies*, pp. 61-69. New York: Academic Press.

Krebs, D. L. (1991). Altruism and egoism: A false dichotomy? *Psychological Inquiry*, 2, 137-139.

Krebs, D. L. , & Russell, C. (1981). Role-taking and altruism: when you put yourself in the shoes of another, will they take you to their owner's aid? In J. P. Rushton & R. M. Sorrentino (Eds.) *Altruism and helping behavior: Social, personality, and developmental perspectives*, pp. 137-165. Hillsdale, NJ: Lawrence Erlbaum Associates.

Kremer, J. F. , & Stephens, L. (1983). Attributions and arousal as mediators of mitigation's effect on retaliation. *Journal of Personality and Social Psychology*, 45, 335-343.

Kuiper, N. A. , & Rogers, T. B. (1979). Encoding of personal information: Self-other differences. *Journal of Personality and Social Psychology*, 37, 499-514.

Kurdek, L. A. (1978). Relationship between cognitive perspective taking and teachers' ratings of children's classroom behavior in grades one through four. *The Journal of Genetic Psychology*, 132, 21-27.

Kurdek, L. A. , & Rodgon, M. M. (1975). Perceptual, cognitive, and affective perspective taking in kindergarten through sixth-grade children. *Developmental Psychology*, 11, 643-650.

Laird, J. D. (1974). Self-attribution of emotion: The effects of expressive behavior on the quality of emotional experience. *Journal of Personality and Social Psychology*, 29, 475-486.

Lanzetta, J. T. , & Englis, B. G. (1989). Expectations of cooperation and competition and their effects on observers' vicarious emotional responses. *Journal of Personality and Social Psychology*, 56, 543-554.

Larsen, R. J. , & Diener, E. (1987). Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality*, 21, 1-39.

Latane, B. , & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* New York: Appleton-Century-Crofts.

Leak, G. K. & Christopher, S. B. (1982). Empathy from an evolutionary perspective. *Journal of Theory and Social Behaviour*, 11, 79-82.

Lee, M. , & Prentice, N. M. (1988). Interrelations of empathy, cognition, and moral reasoning with dimensions of juvenile delinquency. *Journal of Abnormal Child Psychology*, 16, 127-139.

Lerner, M. J. , & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, 85, 1030-1051.

Lerner, M. J. , & Simmons, C. (1966). Observer's reaction to the "innocent victim": Compassion or rejection? *Journal of Personality and Social Psychology*, 4, 203-210.

Letourneau, C. (1981). Empathy and stress: How they affect parental aggression. *Social Work*, 26, 383-389.

Levenson, R. W. , & Gottman, J. M. (1983). Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology*, 45, 587-597.

Levenson, R. W. , & Gottman, J. M. (1985). Physiological and affective predictors of change in relationship satisfaction. *Journal of Personality and Social Psychology*, 49, 85-94.

Levenson, R. W. , & Ruef, A. M. (1992). Empathy: A physiological substrate. *Journal of Personality and Social Psychology*, 63, 234-246.

Levine, L. , & Hoffman, M. L. (1975). Empathy and cooperation in 4-year-olds. *Developmental Psychology*, 11, 533-534.

- Lipps, T. (1903). Einfühlung, inner Nachahmung, und Organempfindungen. *Archiv für die gesamte psychologie*, 2, 185-204.
- Lipps, T. (1905). Das Wissen von fremden Ichen. *Psychologische Untersuchungen*, 4, 694-722.
- Lipps, T. (1926). *Psychological studies*. Baltimore, MD: Williams and Wilkens.
- Loehlin, J. C. , & Nichols, R. C. (1976). *Heredity, environment, and personality: A study of 850 sets of twins*. Austin: University of Texas Press.
- Loehlin, J. C. , Willerman, L. , & Horn, J. M. (1988). Human behavior genetics. In M.R. Rosenzweig and L.W. Porter (Eds.), *Annual review of psychology* (Vol. 39), pp. 101-133. Palo Alto, CA: Annual Reviews Inc.
- Long, E. C. J. , & Andrews, D. W. (1990). Perspective taking as a predictor of marital adjustment. *Journal of Personality and Social Psychology*, 59, 126-131.
- Macaulay, J. , & Berkowitz, L. (Eds.). (1970). *Altruism and helping behavior: Social psychological studies of some antecedents and consequences*. New York: Academic Press, 1970.
- Maccoby, E. E. , & Jacklin, C. N. (1974). *The psychology of sex differences*. Stanford: Stanford University Press.
- Main, M. , & George, C. (1985). Responses of abused and disadvantaged toddlers to distress in agemates: A study in the day care setting. *Developmental Psychology*, 21, 407-412.
- Mandler, G. (1975). *Mind and emotion*. New York: Wiley.
- Marangoni , C, Garcia, S. , & Ickes, W. (1993). Empathic accuracy in a clinically-relevant setting. Unpublished manuscript.
- Marks, E. L. , Penner, L. A. , & Stone, A. V. W. (1982). Helping as a function of empathic responses and sociopathy. *Journal of Research in Personality*, 16, 1-20.
- Matthews, K. A. , Batson, C. D. , Horn, J. , & Rosenman, R. H. (1981). "Principles in his nature which interest him in the fortune of others . . .": The heritability of empathic concern for others. *Journal of Personality*, 49, 237-247.
- McDougall, W. (1908). *An introduction to social psychology*. London: Methuen.
- McHugo, G. J. , Lanzetta, J. T. , Sullivan, D. G. , Masters, R. D. , & Englis, B. G. (1985). Emotional reactions to a political leader's expressive displays. *Journal of Personality and Social Psychology*, 49, 1513-1529.
- Mead, G. H. (1934). *Mind, self and society*. Chicago: University of Chicago Press.
- Mehrabian, A. (1977). Individual differences in stimulus screening and arousability. *Journal of Personality*, 45, 237-250.
- Mehrabian, A. (1980). Basic dimensions for a general psychological theory: Implications for personality, social, environmental, and developmental studies. Cambridge, MA: Oelgeschlager, Gunn & Hain.
- Mehrabian, A. , & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40, 525-543.
- Mehrabian, A. , & O'Reilly, E. (1980). Analysis of personality measures in terms of basic dimensions of temperament. *Journal of Personality and Social Psychology*, 38, 492-503.
- Mehrabian, A. , Young, A. L. , & Sato, S. (1988). Emotional empathy and associated individual differences. *Current Psychology: Research & Reviews*, 7, 221-240.

- Melburg, V. , Rosenfeld, P. , Riess, M. , & Tedeschi, J. T. (1984). A reexamination of the empathic observers paradigm for the study of divergent attributions. *The Journal of Social Psychology*, 124, 201-208.
- Meyer, J. P. , & Mulherin, A. (1980). From attribution to helping: An analysis of the mediating effects of affect and expectancy. *Journal of Personality and Social Psychology*, 39, 201-210.
- Milgram, S. (1965). Some conditions of obedience and disobedience to authority. *Human Relations*, 18, 57-76.
- Miller, P. A. , & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, 103, 324-344.
- Miller, P. A. , Eisenberg, N. , Fabes, R. A. , Shell, R. & Guiar, S. (1989). Mothers' emotional arousal as a moderator in the socialization of children's empathy. In N. Eisenberg (Ed.), *Empathy and related emotional responses*, pp. 65-83. San Francisco: Jossey-Bass.
- Miller, R. S. (1987). Empathic embarrassment: situational and personal determinants of reactions to the embarrassment of another. *Journal of Personality and Social Psychology*, 53, 1061-1069.
- Mussen, P. , & Eisenberg-Berg, N. (1977). *Caring, sharing, and the roots of prosocial behavior in children*. San Francisco: Freeman.
- Neale, M. A. , & Bazerman, M. H. (1983). The role of perspective-taking ability in negotiation under different forms of arbitration. *Industrial and Labor Relations Review*, 36, 378-388.
- Nesdale, A. R. , Rule, B. G. , & Hill, K. (1978). The effect of attraction on causal attributions and retaliation. *Personality and Social Psychology Bulletin*, 4, 231-234.
- Nisbett, R. E. , Caputo, G. C. , Legant, P. , & Marecek, J. (1973). Behavior as seen by the actor and as seen by the observer. *Journal of Personality and Social Psychology*, 27, 154-164.
- Oakley, K. (1959). *Man the tool-maker*. Chicago: University of Chicago Press.
- Passingham, R. E. (1982). *The human primate*. New York: W. H. Freeman.
- Perrett, D. I. , Rolls, E. T. , & Caan, W. (1982). Visual neurons responsive to faces in the monkey temporal cortex. *Experimental Brain Research*, 47, 329-342.
- Perrett, D. I. , Smith, P. A. J. , & Potter, D. D. (1985). Visual cells in the temporal cortex sensitive to face view and gaze direction. *Proceedings of the Royal Society of London (Biology)*, 223, 293-317.
- Peterson, C. & Skevington, S. (1988). The relation between young children's cognitive role-taking and mothers' preference for a conflict-inducing childrearing method. *Journal of Genetic Psychology*, 149, 163-174.
- Piaget, J. (1932). *The moral judgment of the child* (trans.). London: Kegan Paul, Trench, Trubner.
- Piaget, J. & Inhelder, B. (1956). *The child's conception of space*. London: Routledge & Kegan Paul.
- Piliavin, J. A. , Dovidio, J. F. , Gaertner, S. L. , & Clark, R. D. (1981). *Emergency intervention*. New York: Academic Press.
- Plomin, R. (1986). Behavioral genetic methods. *Journal of Personality*, 54, 226-261.
- Plomin, R. , Chipeur, H. M. , & Loehlin, J. C. (1990). Behavioral genetics and personality. In L. A. Pervin (Ed.), *Handbook of personality: theory and research*, pp. 225-243. New York: The Guilford Press.
- Plomin, R. , DeFries, J. C. , & McClearn, G. E. (1990). *Behavioral genetics: A primer* (2nd ed.). New York: W. H. Freeman.

- Plomin, R. , & Rowe, D. (1977). A twin study of temperament in young children. *Journal of Psychology*, 97, 107-113.
- Polk, W. M. (1976). Perceptual orientation, empathy, and the inhibition of aggression (Doctoral dissertation, North Carolina State University, Raleigh, 1976). *Dissertation Abstracts International*, 37, 4225B.
- Quay, H. C. , & Parsons, L. B. (1971). The differential behavioral classification of the juvenile offender. Washington, DC: U.S. Bureau of Prisons.
- Rahim, M. A. (1983). A measure of styles of handling interpersonal conflict. *Academy of Management Journal*, 26, 368-376.
- Regan, D. T. , Straus, E. , & Fazio, R. (1974). Liking and the attribution process. *Journal of Experimental Social Psychology*, 10, 385-397.
- Regan, D. T. , & Totten, J. (1975). Empathy and attribution: Turning observers into actors. *Journal of Personality and Social Psychology*, 32, 850-856.
- Regan, D. , Williams, M. , & Sparling, S. (1972). Voluntary expiation of guilt: A field replication. *Journal of Personality and Social Psychology*, 24, 42.
- Rein, B. A. (1974). The effects of empathy, similarity, and attraction on level of aggression (Doctoral dissertation, University of California, Riverside, 1974). *Dissertation Abstracts International*, 35, 1395B.
- Reisenzein, R. (1986). A structural equation analysis of Weiner's attribution-affect model of helping behavior. *Journal of Personality and Social Psychology*, 50, 1123-1133.
- Richardson, D. R. , Hammock, G. S. , Smith, S. M. , Gardner, W. , & Signo, M. (1992). Empathy as a cognitive inhibitor of impulsive aggression. Unpublished manuscript.
- Riggio, R. E. , Tucker, J. , & Coffaro, D. (1989). Social skills and empathy. *Personality and Individual Differences*, 10, 93-99.
- Roe, K. V. (1980). Toward a contingency hypothesis of empathy development. *Journal of Personality and Social Psychology*, 39, 991-994.
- Rogers, T. B. , Kuiper, N. A. , & Kirker, W. S. (1977). Self-reference and the encoding of personal information. *Journal of Personality and Social Psychology*, 35, 677-688.
- Rosenthal, R. , Hall, J. A. , DiMatteo, M. R. , Rogers, P. L. , & Archer, D. (1979). Sensitivity to nonverbal communication: The PONS test. Baltimore: Johns Hopkins University Press.
- Ross, M. , & Sicoly, F. (1979). Egocentric biases in availability and attribution. *Journal of Personality and Social Psychology*, 37, 322-336.
- Rotenberg, M. (1974). Conceptual and methodological notes on affective and cognitive role taking (sympathy and empathy): An illustrative experiment with delinquent and nondelinquent boys. *The Journal of Genetic Psychology*, 125, 177-185.
- Rothbart, M. K. , & Derryberry, D. (1981). Development of individual differences in temperament. In M. L. Lamb & A. B. Brown (Eds.), *Advances in developmental psychology* (Vol. 1), pp. 37-86. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Rothbart, M. K. , & Maccoby, E. É. (1966). Parents' differential reactions to sons and daughters. *Journal of Personality and Social Psychology*, 4, 237-243.
- Rothenberg, B. B. (1970). Children's social sensitivity and the relationship to interpersonal competence, intrapersonal comfort, and intellectual level. *Developmental Psychology*, 2, 335-350.

Rule, B. G. , Dyck, R. , & Nesdale, A. R. (1978). Arbitrariness of frustration: Inhibition or instigation effects on aggression. *European Journal of Social Psychology*, 8, 237-244.

Rule, B. G. , & Nesdale, A. R. (1976). Emotional arousal and aggressive behavior. *Psychological Bulletin*, 83, 851-863.

Rusbult, C. E. , Verette, J. , Whitney, G. A. , Slovik, L. F. , & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology*, 60, 53-78.

Rushton, J. P. (1981). The altruistic personality. In J. P. Rushton & R. M. Sorrentino (Eds.) *Altruism and helping behavior: Social, personality, and developmental perspectives*, pp. 251-266. Hillsdale, NJ: Lawrence Erlbaum Associates.

Rushton, J. P. (1991). Is altruism innate? *Psychological Inquiry*, 2, 141-143.

Rushton, J. P. , Fulker, D. W. , Neale, M. C. , Nias, D. K. B. , & Eysenck, H. J. (1986). Altruism and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology*, 50, 1192-1198.

Rushton, J. P. , Russell, R. J. H. , & Wells, P. A. (1984). Genetic similarity theory: Beyond kin selection. *Behavior Genetics*, 14, 179-193.

Rushton, J. P. , & Sorrentino, R. M. (1981). Altruism and helping behavior: An historical perspective. In J.P. Rushton & R.M. Sorrentino (Eds.), *Altruism and helping behavior: social, personality, and developmental perspectives*, pp. 3-16. Hillsdale, NJ: Lawrence Erlbaum Associates.

Russell, D. , Peplau, L. A. , & Cutrona, C. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39, 472-480.

Sagi, A. , & Hoffman, M. L. (1976). Empathic distress in newborns. *Developmental Psychology*, 12, 175-176.

Sande, G. N. , Goethals, G. R. , & Radloff, C. E. (1988). Perceiving one's own traits and others': The multifaceted self. *Journal of Personality and Social Psychology*, 32, 13-20.

Scarr, S. , & Carter-Saltzman, L. (1979). Twin method: Defense of a critical assumption. *Behavior Genetics*, 9, 527-542.

Schaller, M. , & Cialdini, R. B. (1988). The economics of empathic helping: Support for a mood management motive. *Journal of Experimental Social Psychology*, 24, 163-181.

Schmidt, G. , & Weiner, B. (1988). An attribution-affect-action theory of behavior: Replications of judgments of help-giving. *Personality and Social Psychology Bulletin*, 14, 610-621.

Schmidt, N. , & Sermat, V. (1983). Measuring loneliness in different relationships. *Journal of Personality and Social Psychology*, 44, 1038-1047.

Schopler, J. , & Matthews, M. (1965). The influence of perceived causal locus of partner's dependence on the use of interpersonal power. *Journal of Personality and Social Psychology*, 2, 609-612.

Schroeder, D. A. , Dovidio, J. F. , Sibicky, M. E. , Matthews, L. L. , & Allen, J. L. (1988). Empathic concern and helping behavior: Egoism or altruism? *Journal of Experimental Social Psychology*, 24, 333-353.

Selman, R. L. , & Byrne, D. B. (1974). A structural-developmental analysis of levels of role-taking in middle childhood. *Child Development*, 45, 803-806.

Shaver, K. G. (1970). Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident. *Journal of Personality and Social Psychology*, 14, 101-113.

Sheehan, E. P. , Lennon, R. , & McDevitt, T. (1989). Reactions to AIDS and other illnesses: Reported interactions in the workplace. *The Journal of Psychology*, 123, 525-536.

Shelton, M.L. , & Rogers, R. W. (1981). Fear-arousing and empathy-arousing appeals to help: The pathos of persuasion. *Journal of Applied Social Psychology*, 11, 366-378.

Siegmán, A. W. , Dembroski, T. M. , & Ringel, N. (1987). Components of hostility and the severity of coronary artery disease. *Psychosomatic Medicine*, 49, 127-135.

Simner, M. L. (1971). Newborn's response to the cry of another infant. *Developmental Psychology*, 5, 136-150.

Smith, A. (1759/1976). *The theory of moral sentiments*. Oxford: Clarendon Press.

Smith, K. D. (1992). Trait sympathy and perceived control as predictors of entering sympathy-arousing situations. *Personality and Social Psychology Bulletin*, 18, 207-216.

Smith, K. D. , Keating, J. P. , & Stotland, E. (1989). Altruism reconsidered: The effect of denying feedback. *Journal of Personality and Social Psychology*, 57, 641-650.

Spence, J. T. , Helmreich, R. L. , & Holohan, C. K. (1979). Negative and positive components of psychological masculinity and femininity and their relationships to self-reports of neurotic and acting-out behaviors. *Journal of Personality and Social Psychology*, 37, 1673-1682.

Spencer, H. (1870). *The principles of psychology*. London: Williams and Norgate.

Srull, T. K. (1984). Methodological techniques for the study of person memory and social cognition. In R. S. Wyer, Jr. & T. K. Srull (Eds.) *Handbook of Social cognition* (Vol. 2), pp. 1-72. Hillsdale, NJ: Lawrence Erlbaum Associates.

Staub, E. (1978). *Positive social behavior and morality: social and personal influences* (Vol. 1). New York: Academic Press.

Staub, E. (1979). *Positive social behavior and morality: Socialization and development* (Vol. 2). New York: Academic Press.

Staub, E. (1987). Commentary on Part I. I. In N. Eisenberg & J. S. Strayer (Eds.), *Empathy and its development*, pp. 103-115. Cambridge: Cambridge University Press.

Stinson, L. , & Ickes, W. (1992). Empathic accuracy in the interactions of male friends versus male strangers. *Journal of Personality and Social Psychology*, 62, 787-797.

Storms, M. D. (1973). Videotape and the attribution process: Reversing actors' and observers' points of view. *Journal of Personality and Social Psychology*, 27, 165-175.

Stotland, E. (1969). Exploratory investigations of empathy. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 4), pp. 271-314. New York: Academic Press.

Stotland, E. , & Dunn, R. E. (1963). Empathy, self-esteem, and birth order. *Journal of Abnormal and Social Psychology*, 66, 532-540.

Stotland, E. , Sherman, S. , & Shaver, K. (1971). *Empathy and birth order: Some experimental explorations*. Lincoln, NB: University of Nebraska Press.

Strack, F. , Martin, L. L. , & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology*, 54, 768-777.

- Straker, G. , & Jacobson, R. S. (1981). Aggression, emotional maladjustment, and empathy in the abused child. *Developmental Psychology*, 17, 762-765.
- Strayer, J. (1983). Affective and cognitive components of children's empathy. Paper presented at the meeting of the Society for Research in Child Development, Detroit.
- Strayer, J. (1987). Affective and cognitive perspectives on empathy. In N. E. Eisenberg & J. S. Strayer (Eds.) *Empathy and its development*, pp. 218-244. Cambridge: Cambridge University Press.
- Strayer, J. , & Roberts, W. (1989). Children's empathy and role taking: Child and parental factors, and relations to prosocial behavior. *Journal of Applied Developmental Psychology*, 10, 227-239.
- Streufert, S. , & Streufert, S. (1969). Effects of conceptual structure, failure, and success in attribution of causality and interpersonal attitudes. *Journal of Personality and Social Psychology*, 11, 138-147.
- Stroop, J. R. (1938). Factors affecting speed in serial verbal reactions. *Psychological Monographs*, 50, 38-48.
- Swart, C. & Berkowitz, L. (1976). Effects of a stimulus associated with a victim's pain on later aggression. *Journal of Personality and Social Psychology*, 33, 623-631.
- Taft, R. (1955). The ability to judge people. *Psychological Bulletin*, 52, 1-23.
- Taylor, S. E. , & Achitoff, P. (1974). To see ourselves as others see us: Empathy, role-taking and actor-observer effects. Unpublished manuscript.
- Taylor, S. E. , & Koivumaki, J. H. (1976). The perception of self and others: Acquaintanceship, affect, and actor-observer differences. *Journal of Personality and Social Psychology*, 33, 403-408.
- Thompson, S. C. , & Kelley, H. H. (1981). Judgments of responsibility for activities in close relationships. *Journal of Personality and Social Psychology*, 41, 469-477.
- Titchener, E. (1909). *Elementary psychology of the thought processes*. New York: Macmillan.
- Tobias, P. V. (1983). Hominid evolution in Africa. *Canadian Journal of Anthropology*, 3, 163-185.
- Toi, M. , & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology*, 43, 281-292.
- Trivers, R. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology*, 46, 35-57.
- Trommsdorff, G. (1991). Child-rearing and children's empathy. *Perceptual and Motor Skills*, 72, 387-390.
- Turner, C. W. , & Berkowitz, L. (1972). Identification with film aggressor (covert role taking) and reactions to film violence. *Journal of Personality and Social Psychology*, 21, 256-264.
- Underwood, B. , & Briggs, S. R. (1980). The influence of perspective-taking and aggressiveness on attitudes toward Iran. Unpublished manuscript.
- Underwood, B. , & Moore, B. (1982). Perspective-taking and altruism. *Psychological Bulletin*, 91, 143-173.
- Vaughan, K. B. , & Lanzetta, J. T. (1980). Vicarious instigation and conditioning of facial expressive and autonomic responses to a model's expressive display of pain. *Journal of Personality and Social Psychology*, 38, 909-923.
- Vaughan, K. B. , & Lanzetta, J. T. (1981). The effect of modification of expressive displays on vicarious emotional arousal. *Journal of Experimental*

Social Psychology, 17, 16-30.

Veitch, R. , & Piccione, A. (1978). The role of attitude similarity in the attribution process. *Social Psychology*, 41, 165-169.

Wallach, L. , & Wallach, M. A. (1991). Why altruism, even though it exists, cannot be demonstrated by social psychological experiments. *Psychological Inquiry*, 2, 153-155.

Washburn, S. L. (1960). Tools and human evolution. *Scientific American*, 203, 62-75.

Waters, E. , Wippman, J. , & Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: Two studies in construct validation. *Child Development*, 50, 821-829.

Wegner, D. M. , & Finstuen, K. (1977). Observers' focus of attention in the simulation of self-perception. *Journal of Personality and Social Psychology*, 35, 56-62.

Weiner, B. (1972). *Theories of motivation*. Chicago: Rand McNally.

Weiner, B. (1980a). A cognitive (attribution)-emotion-action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology*, 39, 186-200.

Weiner, B. (1980b). May I borrow your class notes? An attributional analysis of judgments of help-giving in an achievement-related context. *Journal of Educational Psychology*, 72, 676-681.

Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.

Weiss, R. F. , Boyer, J. L. , Lombardo, J. P. , & Stich, M. H. (1973). Altruistic drive and altruistic reinforcement. *Journal of Personality and Social Psychology*, 25, 390-400.

Weiss, R. F. , Buchanan, W. , Altstatt, L. , & Lombardo, P.P. (1971). Altruism is rewarding. *Science*, 171, 1262-1263.

Whiten, A. , & Byrne, R. W. (1988a). The Machiavellian intelligence hypotheses: Editorial. In A. W. Whiten & R. W. Byrne (Eds.), *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans*, pp. 1-9. Oxford: Clarendon Press.

Whiten, A. , & Byrne, R. W. (1988b). The manipulation of attention in primate tactical deception. In A. W. Whiten & R. W. Byrne (Eds.), *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans*, pp. 211-223. Oxford: Clarendon Press.

Wiehe, V. R. (1987). Empathy and locus of control in child abusers. *Journal of Social Service Research*, 9, 17-30.

Wiesenfeld, A. R. , Whitman, P. B. , & Malatesta, C. Z. (1984). Individual differences among adult women in sensitivity to infants: Evidence in support of an empathy concept. *Journal of Personality and Social Psychology*, 46, 118-124.

Wills, T. A. , Weiss, R. L. , & Patterson, G. R. (1974). A behavioral analysis of the determinants of marital satisfaction. *Journal of Consulting and Clinical Psychology*, 42, 802-811.

Wilson, E. O. (1975). *Sociobiology: The new synthesis*. Cambridge, MA: Harvard University Press.

Wise, P. S. (1985). Empathic responsiveness and self-reported empathy in young adolescents. Presented at the 93rd Annual Convention of the American Psychological Association, Los Angeles.

Wispe, L. (Ed.) (1978). *Altruism, sympathy, and helping: Psychological and sociological principles*. New York: Academic Press.

- Wispe, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology*, 50, 314-321.
- Wispe, L. (1991). *The psychology of sympathy*. New York: Plenum Press.
- Wolosin, R. , Sherman, S. , & Tul, A. (1973). Effects of cooperation and competition on responsibility attribution after success and failure. *Journal of Experimental Social Psychology*, 9, 220-235.
- Wynn, T. (1988). Tools and the evolution of human intelligence. In R. B. Byrne & A. W. Whiten (Eds.), *Machiavellian intelligence: Social expertise and the evolution of intellect in monkeys, apes, and humans*, pp. 271-284. Oxford: Clarendon Press.
- Zahn-Waxler, C. Radke-Yarrow, M. , & King, R. A. (1979). Child rearing and children's prosocial initiations toward victims of distress. *Child Development*, 50, 319-330.
- Zahn-Waxler, C. Robinson, J. L. , & Emde, R. N. (1992). The development of empathy in twins. *Developmental Psychology*, 28, 1038-1047.
- Zillmann, D. (1988). Cognition-excitation interdependencies in aggressive behavior. *Aggressive Behavior*, 14, 51-64.
- Zillmann, D. (1990). The interplay of cognition and excitation in aggravated conflict among intimates. In D. D. Cahn (Ed.), *Intimates in conflict: A communication perspective*, pp. 187-208. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zillmann, D. , Bryant, J. , Cantor, J. R. , & Day, K. D. (1975). Irrelevance of mitigating circumstances in retaliatory behavior at high levels of excitation. *Journal of Research in Personality*, 9, 282-293.
- Zillmann, D. , & Cantor, J. R. (1976). Effect of timing of information about mitigating circumstances on emotional responses to provocation and retaliatory behavior. *Journal of Experimental Social Psychology*, 12, 38-55.
- Zuckerman, M. , Klorman, R. , Larrance, D.T. , & Spiegel, N. H. (1981). Facial, autonomic, and subjective components of emotion: The facial feedback hypothesis versus the externalizer-internalizer distinction. *Journal of Personality and Social Psychology*, 41, 929-944.