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Empathy and Moral Development

IMPLICATIONS FOR CARING
AND JUSTICE

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CHAPTER 2

Empathy, Its Arousal, and Prosocial Functioning

People are innocent bystanders when they witness someone in pain, danger, or any other form of distress. The distress can involve physical pain or discomfort due to injury or disease, emotional pain over the loss or expected loss of a loved one, fear of being attacked, anxiety over failure or financial impoverishment, and the like. The moral issue in these situations is whether the bystander is motivated to help and if he is, the extent to which the motivation is self-serving or based on true concern for the victim. The bystander model is the prototypic moral encounter for empathic distress and related empathic affects. It is also the context for my theory of empathy development. In this chapter I give my definition of empathy, provide evidence that it functions as a prosocial motive, and then describe the mechanism by which it is aroused. In chapters 3 and 4, I present the theory of empathy development and discuss four empathy-based feelings that also function as prosocial motives: sympathetic distress, empathy-based anger, empathy-based feeling of injustice, and guilt over inaction. In subsequent chapters I deal with other types of moral encounters.

DEFINITION OF EMPATHY

* Empathy has been defined by psychologists in two ways: (a) empathy is the cognitive awareness of another person's internal states, that is, his thoughts, feelings, perceptions, and intentions (see Ickes, 1997, for recent research); (b) empathy is the vicarious affective response to another person. This book deals with the second type:

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affective empathy. Affective empathy seems like a simple concept – one feels what the other feels – and many writers define it in simple outcome terms: One empathizes to the extent that one's feeling matches the other's feeling. The more I study empathy, however, the more complex it becomes. Consequently, I have found it far more useful to define empathy not in terms of outcome (affect match) but in terms of the processes underlying the relationship between the observer's and the model's feeling. The key requirement of an empathic response according to my definition is the involvement of psychological processes that make a person have feelings that are more congruent with another's situation than with his own situation. The empathy-arousing processes often produce the same feeling in observer and victim but not necessarily, as when one feels empathic anger on seeing someone attacked even when the victim feels sad or disappointed rather than angry.

defined
This is not to deny the importance of accurate cognitive assessment of another's feelings, what Ickes (1997) calls empathic accuracy. Indeed, a certain amount of empathic accuracy is built into my theory, although, unlike Ickes, I see empathic accuracy as including awareness of the model's relevant past and probable future – the model's life condition – an awareness that contributes importantly to an observer's empathic affect. For this and other reasons, dropping the requirement of an affect match between observer and model affords empathy far more scope and has other advantages, as we shall see.

My focus is empathic distress because prosocial moral action usually involves helping someone in discomfort, pain, danger, or some other type of distress.

EMPATHIC DISTRESS AS A PROSOCIAL MOTIVE

Before reviewing the evidence that empathic distress is a prosocial motive, it is necessary to state what kind of evidence is needed. First, empathic distress must correlate positively with people's helping behavior. Second, empathic distress must not only correlate with but must also precede and contribute to the helping behavior. And third, like other motives, empathic distress should diminish in intensity

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and one should feel better when one helps, but it should continue at a high level when one does not help. The evidence, which I now present, is supportive on all three counts.

a. *Empathic distress is associated with helping.* There are countless studies showing that when people witness others in distress, they typically respond empathically or with an overt helpful act, whichever is being investigated, and when data are available on both responses, subjects typically show them both. This research was reviewed by Hoffman (1981) and Eisenberg and Miller (1987). To update these reviews, fill in the gaps, and give you a feeling for the research, here are examples. Berndt (1979) found that a group of empathic sixth graders who discussed a sad incident in another person's life donated more time to making pictures for hospitalized children than did empathic children who discussed a sad event in their own lives. Davis (1983) found that college students who obtained high empathy scores on a paper-and-pencil measure donated more money to the Jerry Lewis Muscular Dystrophy Telethon than did their less empathic classmates. Empathic college students were more likely to volunteer and put in more hours of work at shelters for homeless families (Penner, Fritzsche, Craiger, & Freifeld, 1995). In a study by Otten, Penner, and Altabe (1991), psychotherapists who scored high on empathy measures were more likely to help college students with a work assignment (writing an article on psychotherapy) than psychotherapists who scored low.

In an experimental study, college students watched a confederate of the investigator working on an unpleasant task (Carlo, Eisenberg, Troyer, Switzer & Speer, 1991). The confederate became distressed and asked the subject to take his place. One group of subjects was given the alternative of sitting and watching the confederate suffer or taking his place, and another group had the option of leaving the experiment and going home. Three-quarters of the first group chose to take the confederate's place rather than continue to experience empathic distress. Remarkably, over half the subjects in the second group chose to take the confederate's place rather than go home, and those who did this were the more empathic members of the group.

Finally, it has been found that observers are quicker to help when

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the victim shows more pain (Geer & Jarnecky, 1973; Weiss, Boyer, Lombardo, & Stitch, 1973) and when their own empathic distress is high rather than low (Gaertner & Dovidio, 1977). The details of these three studies can be found in Hoffman (1978).

b. Empathic distress precedes helping. The above research shows the required association between empathic arousal and helping behavior. There is also evidence from 1970s' experimental research reviewed by Hoffman (1978) that empathic arousal precedes and motivates helping. The last and most interesting of these experiments was done by Gaertner and Dovidio (1977). In that study, female undergraduate students witnessed (through earphones) a situation in which another student (a confederate of the experimenter) stopped working on an experimental task in order to straighten out a stack of chairs that she thought was about to topple over on her. A moment later the confederate screamed that the chairs were falling on her, and then was silent. The main findings were that the observers' heart rate began to accelerate an average of 20 seconds before they rose from their chair to help the victim; and the greater an observer's heart-rate acceleration the more quickly she rose from her chair. In other words, the intensity of the observer's physiological (empathic) arousal was systematically related to the speed of her *subsequent* helping action.

c. Observers feel better after helping. The most direct evidence that empathic distress diminishes in intensity after an observer helps someone can be found in Darley and Latane's (1968) study in which subjects heard sounds indicating that someone was having an epileptic seizure. The subjects who did not respond overtly continued to be aroused and upset, as indicated by their trembling hands and sweaty palms; the subjects who tried to help showed fewer signs of continued upset. A similar finding was obtained in Murphy's (1937) classic nursery school study: When children helped others their empathic distress appeared to diminish; when they did not help their distress was prolonged. These findings suggest that empathic distress acts like other motives: When it is expressed behaviorally its intensity subsides. In the case of empathic distress, there may be an additional factor: The victim's expression of relief may produce a

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feeling of empathic relief in the helper – a vicarious reward that is unavailable to observers who do not help.

These findings could be interpreted as showing that people learn from experience that helping others makes them feel good, so when they feel empathic distress they anticipate feeling good and help for that reason – not to alleviate the victim's distress. The counterargument is that the consequences of an action say nothing about the motivation behind it; because helping makes one feel good does not mean that one helps in order to feel good. Furthermore, there is no evidence that people help in order to feel good, and there is evidence to the contrary (Batson & Weeks, 1996; Batson & Shaw, 1991). These investigators reasoned that if observers helped only for self-reward, then it wouldn't matter to them whether or not the victim's distress was alleviated; the sheer act of helping would make them feel better. What they found was that empathic helpers continued to feel empathic distress when, despite their efforts and through no fault of their own, the victim's distress was not alleviated. This implies that empathic helpers do have their eye on the ultimate consequences of their action for the victim and it does matter to them whether their actions reduce the victim's distress. It seems reasonable to conclude that although empathy-based helping makes people feel good by reducing empathic distress and providing empathic relief, the main objective of empathy-based helping is to alleviate the victim's distress. Empathic distress is, in short, a prosocial motive.

The discussion so far might suggest that humans are saintly empathic-distress-leads-to-helping machines. Not so: Empathic distress does not always lead to helping. Why doesn't it? There are several reasons. First, as we know from the classic work of Latane and Darley (1970), the presence of other bystanders may interfere with a person's helping by activating the assumptions of "pluralistic ignorance" (no one else is reacting; it must not be an emergency after all) and "diffusion of responsibility" (I'm sure someone else has already called the police).

Second, when bystanders are alone their motive to help may be checked by powerful egoistic motives revolving around fear, energy expenditure, financial cost, loss of time, opportunities missed, and

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the like. The bystanders may have learned from experience that helping makes one feel good, but the prospect of feeling good may be overridden by helping's potential cost. As a dramatic case in point, consider this quote from a study comparing Germans who rescued and those who did not rescue Jews from the Nazis during the Holocaust:

My parents were loving and kind. I learned from them to be helpful and considerate. There was a Jewish family living in our apartment building, but I hardly noticed when they left. Later, when I was working in the hospital as a doctor, a Jewish man was brought to the emergency room by his wife. I knew that he would die unless he was treated immediately. But we were not allowed to treat Jews; they could only be treated at the Jewish hospital. I could do nothing. (Oliner & Oliner, 1988, p. 187)

These are the words of a *non-rescuer*, described by Oliner and Oliner as "a kind and compassionate woman predisposed by sentiment and the ethics of her profession to help a dangerously ill man who nonetheless did not do so" (p. 187). As we shall see, those Germans who took risks and rescued Jews were kind and compassionate, but this quote shows that when the costs are high, kindness and compassion may not be enough.

Third, in view of the costs that helping may entail, we might expect people not only to refrain from helping but also to be leery of feeling empathy in the first place for fear of what it may lead them to do: It may lead them to incur the cost of helping, including the cost of experiencing the unpleasantness of empathic distress. People might, therefore, when possible try to forestall feeling for victims in order to escape the motivational consequences of that feeling. A motive to avoid empathy has been demonstrated experimentally by Shaw, Batson, and Todd (1994), who predicted the activation of such a motive when, before being exposed to a person in need, observers are warned that they will be asked to help the person and the helping will be costly. To test this prediction, college students were given the choice of hearing one of two appeals for help made by a homeless man who had lost his job and was very ill: an empathy-inducing

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appeal in which the man presents his needs emotionally and asks the listener to imagine how he feels and what he is going through, and an appeal in which he presents his needs calmly and objectively. As predicted, the subjects who expected to be given a high-cost opportunity to help (spend several hours meeting and giving him support) were less likely to choose the empathy-inducing appeal than subjects who expected the cost of helping to be low (an hour writing and addressing letters on his behalf).

This analysis of the observer's motives points up the complexity of the bystander model. It is not simply that observers feel empathic distress and the desire to help. Egoistic motives are also evoked that compete with empathic distress, may preclude helping, and when bystanders know the costs in advance, may even lead to efforts to avoid empathizing. The bystander model, in short, involves conflict between the motive to help and egoistic motives that can be powerful. This makes it all the more remarkable that empathic distress is an effective prosocial motive. The reason may be its self-reinforcing property: Helpers feel good afterward. If so, it raises the question, Is empathy-based helping prosocial? I say yes (Hoffman, 1981), because it is instigated by another's distress, not one's own, its primary aim is to help another, and one feels good only if the victim is helped.

A final note on empathy's contribution to prosocial behavior. My focus has been on helping others in distress but it is worth noting that empathy has also been found to reduce aggression (Feshbach & Feshbach, 1969; Gibbs, 1987). The aggression-reducing feature of empathy is highlighted in my discussion of the transgressor model (chapter 6) and my review of moral education methods used to reduce aggression in delinquent adolescents (chapter 13). A more subtle, less well-known finding bears on empathy's relation to the ability to manipulate people. According to Christie and Geis (1970), who conducted extensive research on the "Machiavellian" personality in the 1960s, effective manipulators are not, as some might think, effective empathizers who use empathy to read other people's motives and then use their knowledge of others' motives to take advan-

tage of them. Indeed, they are weak empathizers and poor at reading people's motives. Their "advantage" is precisely that they are not empathic, and their resulting insensitivity to others permits them to "bull their way through in pursuit of their own goals." Similarly, in the novel *Blade Runner* (Dick, 1968), "androids" were deemed a menace and outlawed by society because they could be equipped with an intelligence greater than that of many human beings but were totally incapable of empathy.¹ They were viewed as epitomizing manipulators (and killers) because, lacking empathic distress or grief at another's defeat, nothing short of destroying them could stop them from having their way.

Of course, being incapable of empathy does not doom one to manipulating or killing others. O'Neil (1999) describes patients with an empathic disorder called Asperger's (a type of autism) who "realize, and regret, a gap they can cross only with extreme difficulty" (p. F1). They try to break down behavior that most people master without thinking into discrete fragments that can be memorized; they then practice taking the other's point of view. "Things like, 'Do I have to look him in the eye?' 'Yes, but just a little bit to let him know you're listening'" (p. F4). See also Sacks (1995). This contrasts with most humans whose natural empathic sensitivity keeps them from being detached enough to take full advantage of others.

* In other words, empathy not only contributes to helping but it also interferes with aggression and the ability to manipulate others. We now turn to the mechanisms that underlie the arousal of empathic distress.

AROUSAL OF EMPATHIC DISTRESS

There are five empathy-arousing modes, as I originally proposed twenty years ago (Hoffman, 1978) and update here. Three are primitive, automatic, and, most important, involuntary. I describe them first.

1. I thank Krin Gabbard for suggesting I read this book.

① *Mimicry*

Mimicry was described a century ago by Lipps (1906), although it was intuitively understood 150 years earlier by Adam Smith (1759/1976) who observed:

When we see a stroke aimed, and just ready to fall upon the leg or arm of another person, we naturally shrink and draw back our own arm. . . . The mob, when they are gazing at a dancer on the slack rope, naturally writhe and twist and balance their own bodies as they see him do. (pp. 4, 10)

Lipps (1906) defined empathy as an innate, involuntary, isomorphic response to another person's expression of emotion. A close reading of his work shows that he saw the process as involving two distinct steps that operate in rapid sequence (Hoffman, 1978). The observer first automatically imitates and synchronizes changes in his facial expression, voice, and posture with the slightest changes in another person's facial, vocal, or postural expressions of feeling - which Lipps called "objective motor mimicry." The resulting changes in the observer's facial, vocal, and postural musculature then trigger afferent feedback which produces feelings in the observer that match the feelings of the victim. To avoid confusion, I refer to the two steps as "imitation" and "feedback" and the entire process as mimicry.

Mimicry has long been neglected by psychologists, probably because it seems like an instinctual explanation. It warrants our attention, however, because intuitively it appears to be the very essence of empathy - one observes another's expression of feeling, automatically imitates his expression, and then the brain takes over and makes one feel what the other feels. Though important, demonstrating mimicry empirically is difficult, and it therefore requires more attention than the other empathy-arousing modes. I note first that despite the neglect of mimicry, recent years have seen a lot of research on imitation and on feedback, though little on the combined process.

1. Imitation. Bavelas, Black, Lemery, and Mullett (1987) surveyed the research documenting the existence of imitation or mimicry. They

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found that people imitate another's expressions of pain, laughter, smiling, affection, embarrassment, discomfort, disgust, stuttering, reaching with effort, and the like, in a broad range of situations. Developmental researchers have found that infants shortly after birth will try to imitate another's facial gestures: They stick out their tongues, purse their lips, and open their mouths (Meltzoff, 1988; Reissland, 1988). By 10 weeks of age they imitate at least the rudimentary features of their mothers' facial expressions of happiness and anger (Haviland & Lelwica, 1987). And 9-month-olds will mirror their mothers' posed expressions of joy and sadness (Termine & Izard, 1988).

Not only do infants imitate their mothers' facial expressions of emotion but mothers imitate their infants' facial expressions as well, often without being aware of what they are doing (O'Toole & Dubin, 1968). Indeed, adults appear to have a natural tendency to mirror the facial expression of children, and of other adults, without awareness.

Most of the research has employed electromyographic procedures (EMG). These procedures can measure movements of the facial skin and connective tissues (folds, lines, wrinkles; brow and mouth movement) caused by emotion-produced contraction of the facial muscles - movements that are so subtle (weak or transient) that they produce no observable facial expression. Dimberg (1990) measured the facial EMG activity of Swedish college students as they looked at photographs of people displaying happy and angry facial expressions. He found that subjects observing happy facial expressions showed increased muscular activity over the "zygomaticus major" (cheek) muscle region. When they observed angry facial expressions, they showed increased muscular activity over the "corrugator supercilia" (brow) muscle region.

In an empathy-EMG study (Mathews, 1991; Mathews, Hoffman, & Cohen, 1991), college student's faces were secretly videotaped as they viewed a 2-minute film of a young woman recounting a happy event (a dinner party with her fiancé and his parents) and a sad event (being told that her parents had decided to get divorced). In the happy segment, her facial expression, voice, and gestures conveyed a feeling of extreme joy. In the sad segment, her facial expres-

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sion, voice, and gestures conveyed deep sadness. The facial EMG activity of the subjects obtained from the videotapes of their faces showed increased activity over their cheek muscles and decreased activity over their brow muscles when they watched the happy account; the reverse pattern was obtained when they watched the sad account. In a later analysis of the data, trained judges who were "blind" as to which segment the subjects observed rated the subjects' faces as happier when viewing the happier segment and sadder when viewing the sad segment. Similar results were obtained by Hatfield, Cacioppo, and Rapson (1992), whose judges rated college students' facial expressions as happy or sad when observing a 3-minute filmed interview of a man recounting a happy or a sad event in his life (a surprise birthday party or his grandfather's funeral which he attended at age 6).

Although most of the research employs facial expression, people have been found to engage in increased lip activity and frequency of eye-blink responses when observing others who stutter or blink their eyes (Berger & Hadley, 1975; Bernal & Berger, 1976). More important is people's tendency to imitate aspects of another person's speech patterns: speed, pitch, rhythm, pausing, duration of utterance (Buder, 1991). Since speech patterns are associated with feelings - happy feelings with a fast tempo, large variations in pitch, and small variations in amplitude (Scherer, 1982) - vocal mimicry becomes a real possibility. The importance of vocal mimicry is that it can occur early in life, possibly in newborns as we shall see, and, unlike facial expression, one's speech pattern is extremely difficult to control, which makes deception less likely.

The evidence is clear, then, that people tend automatically to imitate the emotional expressions of people around them - their facial expression, vocal expression, and probably their posture. The next question is: What about feedback? Does the imitation-based activation of a person's facial and vocal expression lead to afferent feedback that in turn affects his or her subjective emotional experience from one moment to the next?

2. Feedback. Charles Darwin (1877) was the first to state the feedback hypothesis ("He who gives way to violent gestures will increase

DARWIN

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rage; he who does not control the signs of fear will experience fear in a greater degree," p. 365). William James (1893) went further, postulating that feedback was the key to all emotional experience. The way people know how they feel is by sensing it from their muscular as well as their glandular and visceral responses. The well-known quote is "We feel sorry because we cry, angry because we strike, and afraid because we tremble." James advanced this view a century ago, but it has only recently been put to the test.

In the first serious study of feedback, Laird (1974) told adult subjects that he was interested in studying the action of facial muscles. Laird's experimental room contained apparatus designed to convince the subjects that complicated multichannel recordings of facial muscle activity were about to be made. Silver cup electrodes were attached to their faces between their eyebrows, at the corners of their mouths, and at the corners of their jaws. The experimenter then arranged the subjects' faces into emotional expressions (smiles or angry frowns) without their realizing it, by asking them to contract various muscles. To produce angry frowns he touched the subject lightly between the eyebrows with an electrode and said, "Pull your brows down and together . . . good, now hold it like that"); he then asked the subject to contract the muscles at the corners of his jaw ("clench your teeth"). To produce happy faces the subjects were asked to contract the muscles near the corners of their mouths ("draw the corners of your mouth back and up"). Laird found that the subjects in the frown condition felt angrier and those in the smile condition felt happier than their peers. Furthermore, cartoons viewed when the subjects were "smiling" were rated by them as being funnier than cartoons they viewed when "frowning." And, in a later study, subjects in the "smile" condition were better at recalling happy events in their lives than sad events, whereas subjects in the "frown" condition were better at recalling sad events (Laird, Wagener, Halal, & Szedga, 1982). These comments by a subject in the first study show how the process may have worked:

When my jaw was clenched and my brows down, I tried not to be angry but it just fit the position. I'm not in an angry mood but I

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found my thoughts wandering to things that made me angry, which is sort of silly, I guess. I knew I was in an experiment and knew I had no reason to feel that way, but I just lost control. (p. 480)

Other equally ingenious techniques have been used to produce smiles without subjects' awareness. In one experiment, smiles were produced by requiring subjects to fill out rating forms with a pen held in their front teeth, which eases the facial muscles into a smile. These subjects found humorous cartoons funnier than did students who held the pen in their lips, forcing their faces into a frown position (Strack, Martin, & Stepper, 1988). In another experiment, the investigators wanted subjects to furrow their brows without asking them explicitly to move facial muscles. This was achieved by taping two golf tees to the subjects' forehead (inside corner of each eye) and instructing them to move the tees together, a task which gave their faces a sad look. It also made them feel sad: Looking at photographs of starving children and other sad scenes made them feel sadder than control subjects did who looked at the same scenes without tees on their foreheads. At least a dozen other studies have produced similar results: Subjects feel the specific emotions consistent with the facial expressions they adopt and have trouble experiencing emotions incompatible with these poses. Still other methods have been used, for example, asking subjects to exaggerate or try to hide any emotional reactions they might have. These studies as well as those mentioned above and others have been reviewed and the evidence is clear that people's emotional experience tends to be influenced by the facial expressions they adopt (Adelman & Zajonc, 1989; Hatfield, Cacioppo, & Rapson, 1992).

Despite the evidence it remains unclear to me whether the subjects actually felt angry or happy because the changes in their stage-managed facial expression activated afferent neural pathways that produced the particular emotion. The alternative is that they perceived the changes in facial-expression kinesthetically and associated the changes with angry or happy experiences ("When I'm angry, my jaws are clenched and my brows are down"). If the latter explanation is correct, the research cannot be said to support afferent feedback, but a weaker self-perception-and-cognitive-inference version of feed-

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back. This issue is important because if afferent feedback exists and operates in early childhood, then mimicry becomes a particularly important mechanism because it enables infants to empathize with another's feeling even before having had their own direct experience with the same feeling; it might even explain the newborn's reactive cry (chapter 3). But if the only feedback is through self-perception and cognitive inference, which requires previous experience with the particular feeling, then empathy in early childhood can only occur through conditioning and direct association. Laird (1984) claims that people engage in both types of feedback: "Some people are happy because they smile, angry because they scowl, and sad because they pout; others define their emotional experience in terms of situational expectations." Laird also presents evidence for this claim (Laird, 1984; Laird, et al., 1994). This dual-process explanation implies, of course, that afferent feedback exists though it is not used by everyone.

An argument can be made in favor of the strong version of the afferent feedback hypothesis. It begins with psychology's long-held assumption that connections between facial expression and emotion are culturally determined. This assumption was laid to rest by the landmark study of Ekman, Sorenson, and Friesen (1969) in which preliterate New Guinea tribespeople identified a number of emotional facial expressions in the same way that subjects in Japan, Brazil, and the United States did. This finding began a new line of research, and evidence has since accumulated suggesting that there are certain (innate emotions) each with its corresponding facial expressions. These innate emotions and expressions provide the foundation for differences in subjective feeling and expression of emotion that are then elaborated by culture and socialization (Ekman, Friesen, O'Sullivan, & Chan, 1987).

* More important for our purposes, the evidence suggests that the connections between certain emotions and facial expressions are universal and based on neural integration. This supports the afferent feedback hypothesis. The existence of afferent feedback does not rule out self-perception-and-cognitive-inference feedback and, indeed, may explain it. That is, it may be true that we feel angry because

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past experience tells us that anger "fits the position" of our stage-managed facial expression, but anger may fit the position in the first place because of afferent feedback. This may also explain in part why feedback based on self-perception and cognitive inference can be as quick-acting, effortless, and involuntary as it appears to be. And, finally, Laird's finding that some people use afferent feedback and others use cognitive inference may be explained by socialization that makes some people more sensitive to situational cues and others more sensitive to internal sensations.

No one to my knowledge has actually demonstrated afferent feedback resulting from imitation. To do this may require investigating imitation-produced changes in facial expression in a realistic setting and assessing the effect of these changes on the subjects' feelings. This seems like a difficult task but Bush, Barr, McHugo, and Lanzetta (1989) may have accomplished it. They asked college students to watch comic routines under different conditions and judge how funny they were. A group that was instructed to "relax and enjoy" the routines, and viewed the routines interspersed with shots focused on the studio audience's laughing faces, imitated the audience's laughing faces and found the routines funnier than a group given the same instructions without seeing the audience. This suggests that the subjects' audience-imitating smiles resulted in afferent feedback that made them feel happier and judge the routines funnier. A more parsimonious interpretation is that feedback was unnecessary: The audience's laughing faces made the subjects both smile and think the routines were funnier. Barr et al. anticipated this, however, and included a group that saw the audience's laughing faces but were instructed to inhibit all bodily and facial movements during the experiment. This group did not find the routines funny. In other words, two groups saw the audience's laughing faces but only the group that imitated the audience found the routines funnier - presumably because of afferent feedback.

A possible problem still remains, it seems to me: Only the imitation group behaved spontaneously. The no-imitation group did not, and to follow the instructions and keep from laughing they might have turned away from the audience or tried to think about non-

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funny things. If so, then it is possible that had they focused on the audience they would have found the routines funnier despite not imitating the audience's laughing faces, which would rule out an afferent feedback explanation. This is sheer speculation: It seems more reasonable that the authors did it right; the group focused on the audience (in keeping with their instructions) and they did not find the routines funnier because of the lack of afferent feedback.

conclusion / *non* It seems reasonable to conclude that the weight of the evidence for the universality of emotions plus the evidence for imitation and feedback favors the imitation-feedback sequence and the mimicry process as described by Lipps. This means that mimicry is probably a hard-wired neurologically based empathy-arousing mechanism whose two steps, imitation and feedback, are directed by commands from the central nervous system. This is important for two reasons. First, as noted, a hard-wired mimicry provides a quick-acting mechanism enabling infants to empathize and feel what another feels without previously experiencing that emotion. I say quick-acting, following Davis's (1985) colorful argument that mimicry is too complex and fast-acting to be done consciously. Davis points out that whereas even the lightning-fast Muhammad Ali took 190 milliseconds to spot a light and an additional 40 milliseconds to throw a punch in response, videotapes of college students in conversation show that each student's speech and body motions were synchronized to the other's in 20 milliseconds or less. A second reason for the importance of mimicry's being hard-wired is that besides being involuntary and fast, mimicry is the only empathy-arousing mechanism that assures a match between the observer's feeling and expression of feeling and the victim's feeling and expression of feeling, at least in face-to-face encounters.

This match in emotional expression looms large in the research done by Bavelas et al. (1987) and Bavelas, Black, Chovil, Lemery, and Mullett (1988), which supports their contention that mimicry is a communicative act, conveying a rapid and precise nonverbal message to another person. Specifically, they argue that people are communicating solidarity and involvement ("I am with you" or "I am like you") when they mimic. "By immediately displaying a reaction

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appropriate to the other's situation (e.g., a wince for the other's pain), the observer conveys precisely and eloquently both awareness of and involvement with the other's situation" (1988, p. 278). If Bavelas et al. are right, then mimicry may not just be another mechanism of empathic arousal that predisposes people to help others, but it may also be a direct means of giving support and comfort to others. That is, mimicry-based empathy may not only be a prosocial motive but also a prosocial act.

Classical Conditioning

Classical conditioning is an important empathy-arousing mechanism in childhood especially in the early, preverbal years. It appears that young children (or anyone for that matter) can acquire empathic feelings of distress as conditioned responses whenever they observe someone in distress at the same time that they are having their own independent experience of distress. Thus Lanzetta and Orr (1986) found that presenting adults with a fear-producing danger signal (shock electrodes) along with an another adult's fearful facial expression, results in fearful faces becoming conditioned stimuli that evoke fear in the subjects even when the shock electrodes are removed from view. Using a similar procedure, happy faces and neutral tones can become conditioned fear-producing stimuli, though not as effectively as fearful faces. At the other extreme, and of greater interest to us, two decades of research have shown, contrary to previous belief, that conditioning is possible in newborns: The sucking response of 4-day-olds, for example, can be conditioned to stroking their forehead (Blass, Ganchrow, & Steiner, 1984).

This pairing of one's actual distress with expressive cues of distress in others may be inevitable in mother-infant interactions, as when the mother's feelings are transferred to the infant in the course of physical handling. For example, when a mother feels anxiety or tension, her body may stiffen and the stiffening may transmit her distress to the infant she is holding. The infant is now distressed; and the stiffening of the mother's body was the direct cause – the unconditioned stimulus. The mother's accompanying facial and verbal ex-

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pressions then become conditioned stimuli, which can subsequently evoke distress in the child even in the absence of physical contact. This mechanism may explain Sullivan's (1940) definition of empathy as a form of "nonverbal contagion and communion" between mother and infant; and Escalona's finding (1945), in a woman's reformatory where mothers cared for their own infants, that the infants were most upset when their mothers were waiting to appear before a parole board. Furthermore, through generalization of the conditioned stimulus, facial and verbal signs of distress from *anyone*, not only the mother, can make the infant feel distressed.

This type of direct physical conditioning is not confined to negative affect. When a mother holds the baby closely, securely, affectionately, and has a smile on her face, the baby feels good and the mother's smile is associated with that feeling. Later, the mother's smile alone may function as a conditioned stimulus that makes the baby feel good. And, again through stimulus generalization, other people's smiles can make the baby feel good. This process is relevant here because it may contribute to the empathic relief discussed earlier when the person one has helped smiles in gratitude or relief.

Afferent feedback, an essential component of mimicry, may also play a role in conditioning, and it may contribute to a certain degree of match between the observer's and the victim's feeling. That is, changes in the observer's facial expression accompanying empathic distress aroused by conditioning may trigger afferent feedback and produce feelings in the observer that match the victim's feelings, because: (a) all humans have certain distress experiences in common (loss, injury, deprivation), (b) they are structurally similar to each other and therefore likely to process distress-relevant information similarly, and (c) they are therefore likely to respond to similar stressful events with similar feelings (Ekman et al., 1987).

Indeed, conditioning might be thought of, like mimicry, as a two-step process: conditioning of facial expression followed by afferent feedback. There is a big difference of course: Mimicry assures a match between victim's and observer's feeling because it is the only process whose first step (imitation) is a direct response to the victim's

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facial expression; whereas conditioning can be a response to the victim's situation.

Direct Association

A variant of the conditioning paradigm, described some time ago by Humphrey (1922), is the direct association of cues in the victim's situation that remind observers of similar experiences in their own past and evoke feelings in them that fit the victim's situation. We have a distressing experience; later on we observe someone in a similar situation; and his facial expression, voice, posture, or any other cue in the situation that reminds us of our past experience may evoke a feeling of distress in us. A frequently cited example is the boy who sees another child cut himself and cry. The sight of the blood, the sound of the cry, or any other cue from the victim or the situation that reminds the boy of his own past experiences of pain may evoke an empathic distress response. Another example is children's past experiences of separation from the mother - short daily separation, prolonged separation, or their worrying about the mother's dying - which may facilitate their empathizing with another person whose mother is hospitalized or dies.

Direct association differs from conditioning because it does not require previous experiences in which distress in oneself is actually paired with cues of distress in others. The only requirement is that the observer has had past feelings of pain or discomfort, which can now be evoked by cues of distress from victims or situational cues that are similar to those painful experiences. Direct association thus has more scope than conditioning and provides the basis for a variety of distress experiences in others with which children may empathize. Furthermore, what I said about the possible role of afferent feedback in conditioning may also be true of direct association: Changes in an observer's facial expression resulting from direct association may, through afferent feedback, contribute to a certain degree of match between the observer's and the victim's feeling. Here

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is a vivid example of direct association described by a college student:

Getting off the bus I saw a man slip and fall and hit his head on the stairs. I was shocked. An incident flashed through my mind when I slipped on the sidewalk and cracked my skull. I don't know what came over me. I didn't think of anything but to rush to help and somehow get him to feel okay. I remember yelling at the people to call 911. I must have spent over two hours making sure everything was okay. I know myself, and I know I wouldn't have felt okay just to get him up and leave it to someone else to take care of him.

To summarize, mimicry, conditioning, and direct association are important mechanisms of empathic arousal for several reasons: (a) they are automatic, quick-acting, and involuntary; (b) they enable infants and preverbal children, as well as adults, to empathize with others in distress; (c) they produce early pairings of children's empathic distress with other people's actual distress, which contributes to children's expectation of distress whenever they are exposed to another's distress; (d) they are self-reinforcing to some extent because the helping behavior they foster may produce empathic relief; (e) they contribute an involuntary dimension to children's future empathy experiences.

The question may be raised whether conditioning and direct association are empathy-arousing processes when triggered by the situation rather than by the victim's feeling. I consider them empathy-arousing processes as long as the observer attends to the victim and the feelings evoked in the observer fit the victim's situation rather than the observer's. In any case, the problem does not exist in face-to-face encounters, where mimicry defines the observer's distress as clearly empathic, and conditioning and association may contribute to the intensity of that distress. The empathy aroused in observers by the combination of mimicry, conditioning, and association is, to be sure, a passive, involuntary response, based on the pull of surface cues and requiring the shallowest level of cognitive processing. It is a potentially powerful empathy-arousing package, nonetheless, precisely because it shows that humans are built in such a way that they can involuntarily and forcefully experience another's emotion - that

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is, a person's distress is often contingent not on his own but on someone else's painful experience.

It is a limited empathy-arousing package, however, because of the minimal involvement of language and cognition. This limitation makes it necessary for the victim to be present and enables observers to empathize only with simple emotions. The three mechanisms that make up the package also make little or no contribution to mature empathy's metacognitive dimension – the awareness that one's feeling of distress is a response to another's distressing situation. These deficiencies are overcome by language and cognitive development, which are central to the two remaining modes of empathy arousal, mediated association and role-taking, to which we now turn.

Mediated Association

In the fourth empathic arousal mode, verbal mediation, the victim's emotionally distressed state is communicated through language. To highlight the processes involved in mediated association, consider what happens when language provides the only cue about another's affective state, for example, when the other person is not present but we receive a letter describing what happened to him or how he feels. Language might produce an empathic response because of the physical properties of words which have become conditioned stimuli (the sound of the word *cancer* may arouse fear in children who do not know its meaning but associate the sound with adult expressions of fear and anxiety). This is not what is special about language, however.

What is special about language is not the physical properties of words but their semantic meaning. Verbal messages from victims must be semantically processed and decoded. When this happens, language is the mediator or link between the model's feeling and the observer's experience. The message may express the model's feeling (I'm worried), the model's situation (my child was just taken to the hospital), or both. Empathic affect may then be aroused in observers who decode the victim's message and relate it to their own experience. Alternatively, the decoded message enables the observer to

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conjure up visual (facial expression, posture) or auditory images of the victim (cries, moans) and the observer then responds empathically to these images through direct association or mimicry.

Verbally mediated empathic arousal is interesting for several reasons. First, the time it takes to process a message semantically and relate it to one's experience, though undoubtedly greater than the time required by conditioning, association, and mimicry, varies enormously. Semantic processing can be drawn out but it can also be amazingly fast: It takes less than a second to categorize words in a list (which word is a fruit?) and 2 to 3 seconds to judge whether a word is a synonym of another word (Gitomer, Pellegrino, & Bisanz, 1983); Rogers, Kuiper, & Kirker, 1977). Second, semantic processing undoubtedly requires more mental effort than conditioning, association, and mimicry.

Third, because one is not responding directly to the victim or his situation, semantic processing puts psychological distance between observers and victims due to the decoding and encoding processes that intervene. That is, the victim encodes his feelings into words (sad, afraid). But words are general categories that can only approximate the victim's feelings at the time, and words are the total input available to the observer. In decoding the message the observer must reverse the sequence, going from the general category of feeling represented by the word to his own specific feeling and the associated past events in which he had that feeling. As a result, the observer's feelings have much in common with the victim's feelings, owing to the normative, shared meaning of the victim's words, but there is always some slippage due to encoding and decoding "errors" (and memory lapses for associated past events). These errors can be reduced when victims are expert at putting feelings into words and when observers know the victim well, know how he feels in different situations and can perhaps imagine his facial expression and behavior in the immediate situation. In general, we would expect verbal mediation to reduce the intensity of observer's empathic response below what it would be when victims are present - although there are exceptions to this, which will be discussed in the next chapter.

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In most bystander situations the victim is present and verbal communication of his distress is accompanied by visual or auditory cues. These cues may have triggered the observer's empathic response in the first place, through conditioning, association, or mimicry because these are faster-acting than semantically processing the verbal message. Semantic processing, I would hypothesize, is more likely to follow and fine-tune the observer's empathic response, although it may at times initiate the empathic process, as when the verbal message precedes the victim's arrival on the scene. Whatever the sequence, the victim's expressive cues, which are likely to be picked up through conditioning, association, and mimicry, may keep the empathic process "alive" because these cues are salient, vivid, and can therefore hold the observer's attention - in contrast to verbal messages, which are distancing and to some extent dampen empathic affect because of the encoding and decoding involved in processing them.

The victim's expressive cues may also keep observers from being misled when victims' words belie their feelings, because of the human tendency to "leak" feelings through involuntary changes in facial expression, posture, and tone of voice. These involuntary changes in expression can be picked up and communicated to the observer by conditioning, association, and mimicry. This points up a second communication function of empathic affect (see Bavelas et al., 1988, above for the first), which is to *inform* its motivational component (Hoffman, 1981). Thus empathic affect is generated both by primitive and verbally mediated mechanisms. The information from these two sources of empathic affect is usually congruent, but when it is not congruent the discrepancy can provide corrective feedback that helps observers to make a more accurate assessment of the victim's state and thus to have a more veridical empathic response.

Verbally mediated empathic distress is illustrated in a study by Batson, Sympson, and Hindman (1996). Adolescent subjects read stories in which someone of the same sex described an upsetting life experience. One story described the acute embarrassment and shame, the enduring cruel remarks and teasing, and the hating to see oneself in the mirror that resulted from having a bad case of acne.

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The other story described feeling betrayed and rejected, trying to regroup and move on, and experiencing self-doubt and lingering love after being rejected by a long-term dating partner. The subjects reported feeling considerable empathic distress after reading the stories. The female subjects reported even greater empathic distress if they recalled having a similar experience themselves, which suggests verbally mediated association. Verbal mediation probably also enabled all the subjects to imagine themselves in the victim's place, an empathy-arousing mechanism to which we turn in a moment, after this quite different example of cognitively, though not verbally, mediated empathic distress which was described to me by a student.

When dealing with someone with a terminal illness I was always taught to never discuss that illness with them, just to talk about everyday topics. About five years ago my grandma lapsed into a coma, and for a year she "lived" this way. I would often speak to her on the phone, identifying myself and talking to her about my life. It was very difficult and painful for me because there would never be a response and I could never question her. I would speak with her in the hope that she would respond some way. She never did.

In this case there were no expressive cues from the victim except silence which would have meant nothing if not for the observer's knowledge and understanding of the victim's plight.

Role-Taking

The fifth mode of empathic arousal requires an advanced level of cognitive processing: putting oneself in the other's place and imagining how he or she feels. The idea that putting oneself in the other's place can make one feel something of what the other feels is not new. Two-and-a-half centuries ago the British philosopher David Hume suggested that because people are constituted similarly and have similar life experiences, when one imagines oneself in another's place, one converts the other's situation into mental images that then evoke the same feeling in oneself (Hume, 1751/1957). Adam Smith, a contemporary, agreed with Hume about empathy's importance, and

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Smith's speculations about the nature of the empathic process foreshadowed some of today's formulations. He realized, for example, that empathy could be a response to direct expressive cues of another's feeling: "Grief and joy strongly expressed in the look and gestures of anyone at once affect the spectator with some degree of a like painful or agreeable emotion" (Smith, 1759/1965, p. 260). He also viewed empathy as universal and involuntary: "Even the greatest ruffian, the most hardened violator of the laws of society is not without it" (p. 257). Though involuntary, empathy is enhanced by cognitive processes.

Adam Smith
By the imagination we place ourselves in the other's situation, we conceive ourselves enduring all the same torments, we enter, as it were, into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something which, though weaker in degree, is not altogether unlike them. (p. 261)

Despite these early beginnings, role-taking as a mechanism of empathic arousal was not investigated empirically until the mid-1960s. The most pertinent research was done by Stotland (1969). In one study, subjects were instructed to imagine how they would feel and what sensations they would have in their hands if they were exposed to the same painful heat treatment that was being applied to someone they were observing through a one-way mirror. These subjects showed more empathic distress, as measured by palmar sweat and verbal report, than subjects who were instructed to attend closely to the victim's physical movements. They also showed more empathic distress than subjects who were instructed to imagine how the victim felt while undergoing the heat treatment. The first finding indicates that imagining oneself in the victim's place is more empathy-arousing than focusing on his expressive movements. The second finding suggests that imagining oneself in the other's place is more empathy-arousing than focusing one's attention directly on the victim's feeling. Stotland also found that the subjects who were instructed to imagine themselves in the victim's place did not show an increase in palmar sweat until about 30 seconds after the experi-

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menter announced that the painful heat treatment had begun, which was longer than the time it took for subjects who were simply asked to observe the victim. The delay in empathic responsiveness could have been due to the cognitive demands of role-taking (plus the mental effort involved in following the instructions).

Stotland's research suggested to me that there may be two types of role-taking that have somewhat different effects: One is the usual conception of role-taking in which one imagines oneself in the other's place. In the second type, one focuses directly on the other's feeling. I conducted dozens of interviews asking people to describe instances in which they responded empathically to victims who were present, victims who communicated their distress in writing, and victims whose distress was communicated to them by a third person. The interviews served two purposes: They confirmed the two types of role-taking as well as a third, combined type, and they suggested the cognitive-affective interaction processes that may underlie the types, as follows.

1. *Self-focused role-taking.* When people observe someone in distress they may imagine how they would feel in the same situation. If they can do this vividly enough, they may experience some of the same affect experienced by the victim. And if they are reminded of similar events in their own past, or if they remember worrying about such events happening, then their empathic response to the victim may be enhanced through association with the emotionally charged memory of those actual or worried-about events.

2. *Other-focused role-taking.* On learning of another's misfortune, people may focus directly on the victim and imagine how he feels; and doing this may result in their feeling something of the victim's feeling. This empathic response may be enhanced by bringing in any personal information they have about the victim (his character, life-condition, behavior in similar situations), and any normative knowledge they may have of how most people feel in that situation. It may be enhanced further if they attend to the victim's facial expression, voice tone, or posture, because these nonverbal cues of distress may enlist the more primitive empathy-arousing mechanisms (conditioning, association, mimicry). This can be done

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even in the victim's absence, as when observers who are closely related to the victim imagine how he looks, "hear" his cries, and respond empathically as if he were present.

Based on my interviews, I suggested that Stotland's finding that self-focused role-taking produced more intense empathic distress than other-focused role-taking could be explained as follows:

Imagining oneself in the other's place reflects processes generated from within the observer... in which connections are made between the stimuli impinging on the other person and similar stimulus events in the observer's own past. That is, imagining oneself in the other's place produces an empathic response because it has the power to evoke associations with real events in one's own past in which one actually experienced the affect in question. (Hoffman, 1978, p. 180)

Such internally generated responses are less likely when one focuses on the victim.

The hypothesis that self-focused role-taking produces more intense empathic affect than other-focused role-taking has recently been confirmed in an experimental study by Batson, Early, and Salvarani (1997). Undergraduate subjects listened to a (bogus) radio interview of a young woman in serious need: Her parents and a sister had recently been killed in an automobile crash. She explained that she was desperately trying to take care of her surviving younger brother and sister while she finished her last year of college. If she did not finish, she would not be able to earn enough money to support them and would have to put them up for adoption. One group of subjects was instructed to remain objective while listening, another to imagine how the young woman "feels about what has happened to her and how it has affected her life," and another to imagine how "you yourself would feel if you were experiencing what has happened to her and how this experience would affect your life." The main finding was that both role-taking conditions produced more empathic distress than the objective condition, but the self-focused condition produced more than the other-focused condition. That is, the subjects who imagined how they would feel in the victim's situation experienced more intense empathic distress

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than those who imagined how the victim felt.² The reason, I suggest, is that imagining how oneself would feel activates one's own personal need system.

Self-focused role-taking may have its limitations, however. When people take the victim's place and bring in emotionally charged personal memories, the memories may at times take control of their response and turn their attention away from the victim toward themselves. That is, an observer feels empathic/sympathetic distress ("I feel so much of your pain. It hurts me so much to see this happen to you"), but when he starts ruminating about a similar perhaps more traumatic experience in his own past (self-focused role-taking), he begins to feel a more personal distress; the empathic pain remains, but the image of the victim recedes into the background. In other words, the observer is overwhelmed by the empathic connection with the victim, and the empathic connection is then severed, ironically, because the empathic affect resonates so effectively with the observer's own needs; and his focus, which was initially on the victim, shifts toward himself. Ruminating about his painful past, he becomes lost in egoistic concerns and the image of the victim that initiated the role-taking process slips out of focus and fades away, aborting or temporarily aborting the empathic process.

I call this loss of empathic connection "egoistic drift" (Hoffman, 1978). Egoistic drift points up empathy's fragility: It highlights the fact that **although humans can empathize with the other they are not the other.** My hypothesis is that self-focused role-taking arouses more intense empathic distress because it makes a direct connection between the victim's affective state and the observer's own need system. But this very connection makes it vulnerable to egoistic drift. The result is that self-focused role-taking produces a more intense,

2. The actual finding was that both the self- and other-focused conditions produced more empathic/sympathetic distress than the objective condition, but the self-focused condition produced in addition a high degree of relatively "pure" empathic distress (called "personal distress" by Batson et al., 1997). The terms *empathic/sympathetic distress* and *pure empathic distress* will make more sense after reading the next chapter, in which they are discussed at length.

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but sometimes less stable empathic response than other-focused role-taking. Regardless of the explanation, the observer's affective response, though initially triggered by the victim's affective state, would no longer, in my judgment, qualify as empathy unless the observer returned to his initial focus on the victim.

The following experience, reported by an undergraduate, illustrates both the power of self-focused role-taking to evoke empathic affect and its vulnerability to egoistic drift.

The movie *Steel Magnolias* is a poignant film focused on the life of a woman, Shelby, struggling with diabetes. Shelby marries Jackson and they have a son. One evening Jackson returns from work to find Shelby unconscious on the floor with the phone in her hand. Their 3-year-old son is crying beside his mother. Shelby goes to the hospital where she dies. Shelby's mother, M'Lynn, is comforted by her closest friends. At the burial of her only daughter, M'Lynn becomes hysterical. She cries not only about the tragic loss of her daughter but also about the grandson who will never know his mother. She wants to know why God took her Shelby; a mother is not supposed to outlive her child.

I was able to keep my composure until that last scene. As M'Lynn became hysterical - her voice, her words, her facial expression - visions of my grandmother emerged. I began to remember witnessing the same actions . . . performed by my grandmother. I became hysterical. My focus was no longer on Shelby and M'Lynn but rather on my grandmother. I remember how I felt after my aunt died leaving behind her two children. I felt the pain and depression all over again. My friends who were watching the movie with me assumed I was crying because of the movie but in actuality the tears were because of my own life.

Another student contributed this incident, which shows that one need not have had an experience like the victim's but only to be worried about having one.

A friend who is pregnant was just told the baby, her fourth, had Down's Syndrome. I felt really sorry for her. I have been thinking about having children lately. I have none and spend a lot of time worrying about what my life would be like if I had a child with a serious deformity. I imagine all the things that might happen to the child, and to me. When my friend told me that, I immediately

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started thinking about what it would be like if I were just told that the child I was carrying had Down's Syndrome. When this occurred I became so engrossed in my own thoughts about what it would feel like, that I forgot all about my friend and her condition. I was completely consumed by the fear of what might happen to my future rather than what was happening to my friend in the present.

3. *Combination.* Observers can shift back and forth between "other-focused" and "self-focused" role-taking or experience them as co-occurring parallel processes. My discussion suggests that the combination may be the most powerful because it combines the emotional intensity of self-focused role-taking with the more sustained attention to the victim of other-focused role-taking. Indeed, fully mature role-taking might be defined as imagining oneself in the other's place and integrating the resulting empathic affect with one's personal information about the other and one's general knowledge of how people feel in his or her situation. It could go either way: other-focused role-taking in the service of self-focused role-taking, or self-focused role-taking in the service of other-focused role-taking.

A final word about role-taking. Although spontaneous role-taking has been found in adults and in children as young as 9 years old (Wilson & Cantor, 1985), role-taking is more cognitively demanding than the other empathy-arousing mechanisms and might therefore be expected to have a greater voluntary component. It would seem possible, for example, to avoid role-taking by thinking distracting thoughts. This might be difficult, however, in situations that demand paying attention to the victim or when distress cues from the victim are salient, owing to the pull of primitive empathy-arousing mechanisms (conditioning, association, mimicry). This could explain why a group of Stotland's (1969) subjects who were instructed to attend to the victim but avoid putting themselves in his place showed as much palmar sweat as subjects who were simply instructed to attend to the victim; try as they might, these subjects could not avoid empathizing. It may also explain why most everyone regardless of age finds it difficult to avoid empathizing with victims in the movies. That is, they find it difficult to avoid "suspending disbelief," even

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though they know it is all "pretend." Role-taking, in other words, may not be as voluntary a process as it first appears to be.

A final developmental hypothesis: other-focused role-taking is more cognitively demanding (one considers another's inner states) and is thus acquired later. *

IMPORTANCE OF MANY MODES

The importance of many modes of empathic arousal is that they enable observers to respond empathically to whatever distress cues are available. If the only cues are the victim's facial expression, voice, or posture, they can be picked up through mimicry. If the only cues are situational, empathic distress can be aroused through conditioning or direct association. If the victim expresses distress verbally or in writing, or someone else describes his plight, observers can be empathically aroused through verbal mediation or role-taking.

The three primitive modes - mimicry, association, and conditioning - operating together provide a powerful package that may underlie empathic arousal in children's early preverbal years. Mimicry may be particularly important in infancy because it produces a match between observers' and victims' feelings even when observers have not had a similar experience. The three primitive modes also contribute to empathy development beyond infancy by giving young children repeated experiences of feeling distressed as a co-occurring feature of another person's distress, as well as the pleasant experience of empathic relief when they help. Finally, because the three primitive modes are automatic and encompass all the available distress cues, they may account for the involuntary dimension of empathy in adults, which may, among other things, reduce the tendency toward "egoistic drift."

Ordinarily victims are present and all the arousal mechanisms are operating. When that happens there may be a certain division of labor among them. Some arousal mechanisms are more likely to intensify empathic affect or keep one's attention focused on the victim (mimicry). On the other hand, others are more likely to contrib-

ute to "egoistic drift" (especially self-focused role-taking). Some mechanisms may start the empathic process but fade away, while others take over for them. Mimicry, for example, may start the empathy-arousing process but then fade away due to facial muscle fatigue; the victim's face is still cognitively represented, however, and the representation of the face may sustain other empathy-arousing mechanisms and keep them operating. Apart from a division of labor, the modes may interact reciprocally: Empathic affect from primitive modes may trigger role-taking, which may then intensify and give broader meaning to empathic affect from the primitive modes. Which mechanism initiates the process, the primitive or the more cognitive, may be a function of personal style and the context.

The various modes should ordinarily produce the same empathic affect (with exceptions discussed in chapters 3 and 4); and the functional redundancy should assure an empathic response in most observers. Indeed, although one's empathic distress may usually be less intense than the victim's actual distress, the combined effects of the arousal modes may sometimes make one's empathic distress more intensely painful than the victim's actual distress. This may explain a phenomenon that fascinated Darwin (1862/1965, p. 216): "It is not a little remarkable that sympathy with the distresses of others should excite more tears more freely than our own distresses; and this is certainly the case." My hypothesis is that what happens is the observer's imagination runs rampant as he or she contemplates being in the victim's place (self-focused role-taking), whereas the victim has had time to accept and come to terms with his or her condition. As a result, the observer's empathic distress can be more intense than the victim's actual distress – and presumably more intense than the *observer's* actual distress would be in the victim's situation. More about this later (chapter 8).

The existence of multiple arousal modes bears on my definition of empathy as not requiring (though often including) a close match between observer's and victim's affect. On the one hand, the many modes virtually assure a certain degree of match between the feelings of observers and victims, even across cultures, for three reasons: First, mimicry, because it is automatic and neurally based, assures a

close match in feeling between observer and victim. To assure some degree of match, similar and process information respond to similar events as we shall see, there require a match and, in the victim's life condition. These are occasions are likely to be paramount.

To summarize, empathic liable human response, childhood especially in females, operate past childhood and mention to empathy through to respond to whatever causes or her to do that – instantly awareness. An example of a person tries to avoid empathy listening to a description of a vulnerable to empathic distress. The two cognitively advanced taking – can be drawn out if one is paying attention to an involuntary, and triggered situation. What these two conditions that they add scope to one's empathize with others who are the evidence presented earlier social moral motive and with basic part of human nature (1981). It is also in keeping with hereditary component: Identical on empathy measures than are Waxler, Robinson, Emde, & Pl

Before concluding this chapter

Empathic Arousal and Prosocial Functioning

close match in feeling when there is face-to-face contact between observer and victim. Second, even conditioning and association assure some degree of match because all humans are structurally similar and process information similarly; they are therefore likely to respond to similar events with similar feelings. On the other hand, as we shall see, there are occasions in which empathy does not require a match and, indeed, may require a certain *mismatch*, as when the victim's life condition belies his feelings in the immediate situation. These are occasions in which verbal mediation and role-taking are likely to be paramount.

To summarize, empathic distress is a multidetermined, hence reliable human response. The three preverbal modes are crucial in childhood especially in face-to-face situations, but they continue to operate past childhood and provide an important involuntary dimension to empathy throughout life. They not only enable a person to respond to whatever cues are available, but they also compel him or her to do that - instantly, automatically, and outside of conscious awareness. An example can be found in empathic avoidance: If a person tries to avoid empathy by refraining from eye contact or not listening to a description of a victim's life condition, he may still be vulnerable to empathic distress through conditioning or association. The two cognitively advanced modes - verbal mediation and role-taking - can be drawn out and subjected to voluntary control, but if one is paying attention to the victim, they too can be fast-acting, involuntary, and triggered immediately on witnessing the victim's situation. What these two cognitively advanced modes contribute is that they add scope to one's empathic capability and enable one to empathize with others who are not present. All of this fits well with the evidence presented earlier for empathy's effectiveness as a prosocial moral motive and with the argument that empathy became a basic part of human nature through natural selection (Hoffman, 1981). It is also in keeping with the finding that empathy has a hereditary component: Identical twins are more similar to each other on empathy measures than are fraternal twins of the same age (Zahn-Waxler, Robinson, Emde, & Plomin, 1992).

Before concluding this chapter, I would like to raise a fundamental

Innocent Bystander

question about empathy: why do the various empathy-arousing mechanisms work, that is, why do they elicit feelings in observers that approximate the feelings of those being observed? My answer, implied in the foregoing discussion of mechanisms, is first and foremost that because of the structural similarities in people's physiological and cognitive response systems, similar events evoke similar feelings – similar but not identical for the reasons already given. However, the degree of structural similarity, hence the tendency to empathize with one another, should be greater between people in the same culture who live under similar conditions, and especially between those who interact frequently, than between people from different cultures or who rarely interact. This is obviously true of the cognitive system but it is also true of the physiological system, as evidenced by Levenson and Ruef (1997) who found an increased "physiological synchrony" in humans who spend a lot of time together, for example, an increased covariation of heart-rate changes between patients and their therapists, and between mothers and their infants.

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