

# SOCIAL intelligence

*The New Science  
of Human Relationships*

• • •

**DANIEL GOLEMAN**

BANTAM BOOKS

NCE



SOCIAL INTELLIGENCE  
A Bantam Book / October 2006

Published by  
Bantam Dell  
A Division of Random House, Inc.  
New York, New York

All rights reserved.  
Copyright © 2006 by Daniel Goleman

Book design by Patrice Sheridan  
Interior art by Robert Bull

Bantam Books is a registered trademark of Random House, Inc., and the colophon is  
a trademark of Random House, Inc.

Library of Congress Cataloging-in-Publication Data

Goleman, Daniel.  
Social intelligence : the new science of human relationships / Daniel Goleman.  
p. cm.  
Contents: Wired to connect—Broken bonds—Nurturing nature—Love's varieties—  
Healthy connections.  
ISBN-13: 978-0-553-80352-5  
ISBN-10: 0-553-80352-2  
1. Interpersonal relations. 2. Intelligence—Social aspects. 3. Emotions—  
Social aspects. I. Title.

HM1106.G66 2006  
158.2—dc22  
2006045971

Printed in the United States of America  
Published simultaneously in Canada

[www.bantamdell.com](http://www.bantamdell.com)

10 9 8 7 6 5 4 3 2 1  
BVG

## An Instinct for Altruism

One afternoon at the Princeton Theological Seminary, forty students waited to give a short practice sermon on which they would be rated. Half the students had been assigned random biblical topics. The other half had been assigned the parable of the Good Samaritan, who stopped to help a stranger by the roadside, an injured man ignored by people supposedly more "pious."

The seminarians worked together in a room, and every fifteen minutes one of them left to go to another building to deliver his sermon. None knew they were taking part in an experiment on altruism.

Their route passed directly by a doorway in which a man was slumped, groaning in evident pain. Of the forty students, twenty-four passed right by, ignoring the plaintive moans. And those who were mulling over the lessons of the Good Samaritan's tale were no more likely to stop and help than were any of the others.<sup>1</sup>

For the seminarians, time mattered. Among ten who thought they were late to give their sermon, only one stopped; among another ten who thought they had plenty of time, six offered help.

Of the many factors that are at play in altruism, a critical one seems to be simply taking the time to pay attention; our empathy is strongest to the degree we fully focus on someone and so loop emotionally. People differ, of course, in their ability, willingness, and interest in paying attention—a sullen teen can tune out her mother's nagging, then a minute later have undivided concentration while

on a phone call to her girlfriend. The seminarians rushing to give their sermon were apparently unwilling or unable to give their attention to the moaning man, presumably because they were caught up in their thoughts and the press of hurrying, and so never attuned to him, let alone helped him.<sup>2</sup>

People on busy city streets worldwide are less likely to notice, greet, or offer help to someone else because of what has been called the "urban trance." Sociologists have proposed that we tend to fall into this self-absorbed state on crowded streets, if only to gird against stimulus overload from the swirl around us. Inevitably, the strategy requires a trade-off: we shut out the compelling needs of those around us along with the mere distractions. As a poet put it, we confront "the noise of the street dazed and deafened."

In addition, social divides shutter our eyes. A homeless person sitting dejectedly on the street of an American city asking for money may receive no attention from passersby, who a few steps away will gladly listen and respond to a well-dressed, outgoing woman asking for signatures on a political petition. (Of course, depending on our sympathies, the attention we give may be just the reverse: sympathy for the homeless person, but none for the political appeal.) In short, our priorities, socialization, and myriad other social-psychological factors can lead us to direct or inhibit our attention or the emotions we feel—and thus our empathy.

Simply paying attention allows us to build an emotional connection. Lacking attention, empathy hasn't a chance.

### WHEN ATTENTION MUST BE PAID

Contrast those events at the Princeton seminary with what happened one rush hour in New York City as I headed for the Times Square subway station after work one day. As usual, a steady torrent of humanity was sweeping down the concrete stairs, rushing to get on the next subway train.

But then I saw something troubling: sprawled across the steps midway down was a shabby, shirtless man, lying motionless, eyes closed.

No one seemed to notice. People simply stepped over his body in their rush to get home.

But, shocked by the sight, I stopped to see what was wrong. And the moment I stopped, something remarkable happened: other people stopped, too.

Almost instantly there was a small circle of concern around the man. Just as spontaneously, messengers of mercy fanned out—one man went over to a hot dog stand to get him some food; a woman scurried to get him a bottle of water; another summoned a subway patrol officer, who in turn radioed for help.

Within minutes the man was revived, eating happily, and waiting for an ambulance. We learned he spoke only Spanish, had no money, and had been wandering the streets of Manhattan, starving. He had fainted from hunger there on the subway steps.

What made the difference? Just noticing for one. By simply stopping to take in the man's plight, I seemed to snap passersby out of their urban trance and called him to their attention. As we tuned in to his predicament, we were moved to help.

No doubt all of us upright citizens on our way home from work were susceptible to silent assumptions about that man on the stairs, stereotypes built from walking by the hundreds of homeless who, sad to say, inhabit the streets of New York and so many other modern urban centers. Urbanites learn to manage the anxiety of seeing someone in such dire straits by reflexively shifting attention away.

I think my own shift-away reflex had been altered by an article I had recently written for *The New York Times* on how closing mental hospitals had converted the city's streets into psychiatric wards. To do research for the article, I spent several days in a van with workers for a social agency that administered to the homeless, bringing them food, offering them shelter, and coaxing the mentally ill among them—a shockingly high proportion—to come to clinics to receive their medications. For quite a while afterward I saw homeless people through fresh eyes.

In other studies using the Good Samaritan situation, researchers find that those who do stop to help typically report that on seeing the other's distress, they felt upset too—and an empathic sense of tenderness.<sup>3</sup> Once one person noticed the other enough to feel empathy, the odds were very high that he would offer some help.

Just hearing about someone lending a helping hand can have a unique impact, inducing a warm sense of uplift. Psychologists use the term "elevation" for the glow stirred by witnessing someone else's kindness. Elevation is the state reported repeatedly when people tell how they felt on seeing a spontaneous act of courage, tolerance, or compassion. Most people find themselves moved, even thrilled.

The acts most commonly named as stirring elevation are helping the poor or sick, or aiding someone in a difficult predicament. But these good deeds need not be as demanding as taking in an entire

family, nor as selfless as Mother Teresa working among the poor in Calcutta. Simple thoughtfulness can elicit a bit of elevation. In a study in Japan, for instance, people readily came up with accounts of *kandou*, times when the heart is so moved—for example, by seeing a tough-looking gang member give up his seat on a train to an elderly man.<sup>4</sup>

Elevation, the research suggests, may be catching. When someone sees an act of kindness, it typically stirs in them the impulse to perform one, too. These social benefits may be one reason mythic tales worldwide are rife with figures who save others through their courageous deeds. Psychologists speculate that hearing a story about such kindness—when it is told vividly—has the same emotional impact as seeing the act itself.<sup>5</sup> That elevation can be contagious suggests that it travels the low road.

## FINE - T U N I N G

On a five-day visit to Brazil with my son, we noticed that the people we met seemed to get friendlier day by day. The change was striking.

At first we largely sensed aloofness or reserve from the Brazilians we met. But by the third day we encountered noticeably greater warmth.

On the fourth day it followed us wherever we went. And by our trip's end we were hugging people good-bye at the airport.

Was it the people of Brazil who had changed? Certainly not. What had melted away was our own uptightness as gringos in an unfamiliar culture. Our defensive reserve had initially closed us off to the Brazilians' open, friendly manner—and it may well have signaled them to keep their distance.

At the beginning of our trip—like a radio set to a slightly off-channel signal—we were too preoccupied to take in the friendliness of the people we encountered. As we relaxed and tuned in to those around us, it was as though we had zeroed in on the right station, the warmth that was there all along. While we are anxious or preoccupied, we fail to register the sparkle in someone's eye, the hint of a smile, or the warm tones of voice—all prime channels for sending messages of friendliness.

A technical explanation for this dynamic spotlights the limits on attention itself. Working memory, or the amount of memory that we can hold in our attention at any one moment, resides in the prefrontal cortex, the citadel of the high road. This circuitry plays a major role in

allocating our attention, by managing the backstage business of an interaction. For instance, it searches our memory for what to say and do, even while it attends to incoming signals and shifts our responses accordingly.

As the challenges thicken, those multiple demands increasingly tax our capacity for paying attention. Signals of worry from the amygdala flood key regions of the prefrontal cortex, manifesting as preoccupations that steal attention away from whatever else we are dealing with. Distress overtaxes attention: merely being an uptight gringo will do it.

Nature puts a premium on smooth communication among members of a given species, sculpting the brain for a better fit—sometimes on the spot. In certain fish, for instance, during courtship a female's brain secretes hormones that temporarily reshape her auditory circuits to improve their attunement to the frequencies of the male's call.<sup>6</sup>

Something similar can be seen in a two-month-old baby who detects his mother approaching: he will instinctively become still, quiet his breathing a bit, turn toward her and look at her face, focus on her eyes or mouth, and orient his ears toward any sounds coming from her, all while making an expression researchers call "knit-brow with jaw-drop." Each of these moves enhances the perceptual ability of the baby to attune to what the mother says or does.<sup>7</sup>

The more sharply attentive we are, the more keenly we will sense another person's inner state: we will do so more quickly and from subtler cues, in more ambiguous circumstances. Conversely, the greater our distress, the less accurately we will be able to empathize.

In short, self-absorption in all its forms kills empathy, let alone compassion. When we focus on ourselves, our world contracts as our problems and preoccupations loom large. But when we focus on others, our world expands. Our own problems drift to the periphery of the mind and so seem smaller, and we increase our capacity for connection—or compassionate action.

## | INSTINCTIVE COMPASSION |

\* A laboratory rat, suspended in the air by a harness, screeches and struggles. Catching sight of the imperiled rat, one of its cagemates becomes upset too and manages to come to the rescue by pressing a bar that lowers the victim safely to the ground.

ness of an in-  
to say and do,  
responses ac-

increasingly  
ry from the  
anifesting as  
r else we are  
g an uptight

among mem-  
er fit—some-  
; courtship a  
happe her au-  
equencies of

baby who de-  
become still,  
er face, focus  
sounds com-  
ers call "knit-  
e perceptual  
does.<sup>7</sup>

we will sense  
kly and from  
versely, the  
o empathize.  
hy, let alone  
contracts as  
we focus on  
he periphery  
capacity for

O N |

creeches and  
ts cagemates  
by pressing a

- Six rhesus monkeys have been trained to pull chains to get food. At one point a seventh monkey, in full view of the others, gets a painful shock whenever one of them pulls for food. On seeing the pain of that shocked monkey, four of the original rhesus monkeys start pulling a different chain, one that delivers less food to them but that inflicts no shock on the other monkey. The fifth monkey stops pulling any chain at all for five days, and the sixth for twelve days—that is, both starve themselves to prevent shocking the seventh monkey.

- Virtually from birth, when babies see or hear another baby crying in distress, they start crying as though they too are distressed. But they rarely cry when they hear a recording of their own cries. After about fourteen months of age, babies not only cry when they hear another, but they also try to relieve the other baby's suffering somehow. The older toddlers get, the less they cry and the more they try to help.

Lab rats, monkeys, and babies share an automatic impulse, one that rivets their attention on another's suffering, triggers similar distressed feelings in themselves, and leads them to try to help. Why should the same response be found in very different species? Simple: Nature conserves, preserving whatever works to use again and again.

In the design of the brain, winning features are shared among various species. Human brains have vast tracts of well-proven neural architecture in common with other mammals, especially primates. The similarity across species in sympathetic distress, coupled with the impulse to help, strongly suggests a like set of underlying circuitry in the brain. In contrast to mammals, reptiles show not the least sign of empathy, even eating their own young.

Although people can also ignore someone in need, that cold-heartedness seems to suppress a more primal, automatic impulse to aid another in distress. Scientific observations point to a response system that is hardwired in the human brain—no doubt involving mirror neurons—that acts when we see someone else suffering, making us instantly feel with them. The more we feel with them, the more we want to help them.

This instinct for compassion arguably offers benefits in evolutionary fitness—properly defined in terms of “reproductive success,” or how many of one's offspring live to parent their own offspring. Over a century ago Charles Darwin proposed that empathy, the prelude to compassionate action, has been a powerful aid to survival in Nature's



toolkit.<sup>8</sup> Empathy lubricates sociability, and we humans are the social animal par excellence. New thinking holds that our sociability has been the primary survival strategy of primate species, including our own.

The utility of friendliness can be seen today in the lives of primates in the wild, who inhabit a tooth-and-claw world akin to that of human prehistory, when relatively few infants survived to child-bearing age. Take the thousand or so monkeys that inhabit Cayo Santiago, a remote island in the Caribbean; all descend from a single band transplanted from their native India in the 1950s. These rhesus macaques live in small groups. When they reach adolescence, the females stay, and the males leave to find their place in another group.

That transition holds real dangers: as the young males try to enter an unfamiliar troupe, up to 20 percent of them die in fights. Scientists have taken spinal fluid samples of one hundred teen macaques. They find that the most outgoing monkeys have the lowest levels of stress hormones and stronger immune function, and—most important—that they are best able to approach, befriend, or challenge monkeys in the new troupe. These more sociable young monkeys are the ones most likely to survive.<sup>9</sup>

Another primate data point comes from wild baboons living near Mount Kilimanjaro in Tanzania. For these baboons, infancy holds great perils: in a good year about 10 percent of infants die; in bad times up to 35 percent die. But when biologists observed the baboon mothers, they found that those who were most companionable—who spent the most time grooming or otherwise socializing with other female baboons—had the infants most likely to survive.

The biologists cite two reasons that a mother's friendliness may help her infants survive. For one, they are members of a clubby group who can help one another defend their babies from harassment, or find better food and shelter. For another, the more grooming the mothers give and get, the more relaxed and healthy they tend to be. Sociable baboons make better mothers.<sup>10</sup>

Our natural pull toward others may trace back to the conditions of scarcity that shaped the human brain. We can readily surmise how membership in a group would make survival in dire times more likely—and how being a lone individual competing for scarce resources with a group could be a deadly disadvantage.

A trait with such powerful survival value can gradually fashion the very circuitry of the brain, since whatever proves most effective in spreading genes to future generations becomes increasingly pervasive in the genetic pool.

If sociability offered humans a winning strategy throughout pre-

history, so have the brain systems through which social life operates.<sup>11</sup> Small wonder our inclination toward empathy, the essential connector, has such potency.

## | AN ANGEL ON EARTH |

A head-on collision had left her car crumpled like a piece of paper. With two bones broken in her right leg, pinned in the wreckage, she lay there in pain and shock, helpless and confused.

Then a passerby—she never found out his name—came over to her and knelt by her side. He held her hand, reassuring her while emergency workers tried to free her. Despite her pain and anxiety, he helped her stay calm.

"He was," as she put it later, "my angel on earth."<sup>12</sup>

We'll never know exactly what feelings moved that "angel" to kneel at that woman's side to reassure her. But such compassion depends on that crucial first step, empathy.

Empathy entails some degree of emotional sharing—a prerequisite to truly understanding anyone else's inner world.<sup>13</sup> Mirror neurons, as one neuroscientist puts it, are "what give you the richness of empathy, the fundamental mechanism that makes seeing someone hurt really hurt you."<sup>14</sup>

Constantin Stanislavski, the Russian developer of the famed Method for stage training, saw that an actor "living" a part could call up his emotional memories from the past to evoke a powerful feeling in the present. But those memories, Stanislavski taught, need not be limited to our own experiences. An actor can as well draw on the emotions of others through a bit of empathy. As the legendary acting coach advised, "We must study other people and get as close to them emotionally as we can, until sympathy for them is transformed into feelings of our own."<sup>15</sup>

Stanislavski's advice was prescient. As it turns out, brain imaging studies reveal that when we answer the question, "How are you feeling?" we activate much of the same neural circuitry that lights up when we ask, "How is *she* feeling?" The brain acts almost identically when we sense our own feelings and those of another.<sup>16</sup>

When people are asked to imitate someone's facial expression of happiness, fear, or disgust, this activates the same circuits involved when they simply observe the person (or when they spontaneously feel that emotion themselves). As Stanislavski understood, these

circuits come even more alive when empathy becomes intentional.<sup>17</sup> As we notice an emotion in another person, then, we literally feel together. The greater our effort or the more intense the feelings expressed, the stronger we feel them in ourselves.

Tellingly, the German word *Einfühlung*, which was first rendered into English in 1909 as the newly coined word “empathy,” more literally translates as “feeling into,” suggesting an inner imitation of the other person’s feelings.<sup>18</sup> As Theodore Lipps, who imported the word “empathy” into English, put it, “When I observe a circus performer on a high wire, I feel I am inside him.” It’s as though we experience the other person’s emotions in our own body. And we do: neuroscientists say that the more active a person’s mirror neuron systems, the stronger her empathy.

In today’s psychology, the word “empathy” is used in three distinct senses: *knowing* another person’s feelings; *feeling* what that person feels; and *responding compassionately* to another’s distress. These three varieties of empathy seem to describe a 1-2-3 sequence: I notice you, I feel with you, and so I act to help you.

All three fit well with what neuroscience has learned about how the brain operates when we attune to another person, as Stephanie Preston and Frans de Waal observe in a major theory linking interpersonal perception and action.<sup>19</sup> These two scientists are uniquely suited to make the argument: Preston has pioneered using the methods of social neuroscience to study empathy in humans, and de Waal, director of Living Links at the Yerkes Primate Center, has for decades drawn lessons for human behavior from systematic observations of primates.

Preston and de Waal argue that in a moment of empathy, both our emotions and our thoughts are primed along the same lines as those of the other person. Hearing a frightened cry from someone else, we spontaneously think of what might be causing their fear. From a cognitive perspective, we share a mental “representation,” a set of images, associations, and thoughts about their predicament.

The movement from empathy to act traverses mirror neurons; empathy seems to have evolved from emotional contagion and so shares its neural mechanisms. Primal empathy relies on no specialized brain area but rather involves many, depending on what we are empathizing with. We slip into the other’s shoes to share what they experience.

Preston has found that if someone brings to mind one of the happiest moments of her life, then imagines a similar moment from the life of one of her closest friends, the brain activates virtually the

comes inten-  
then, we liter-  
re intense the  
elves.

first rendered  
hy," more liter-  
mitation of the  
orted the word  
ocus performer  
we experience  
e do: neurosci-  
uron systems,

d in three dis-  
ling what that  
ther's distress.  
-2-3 sequence:

ned about how  
a, as Stephanie  
y linking inter-  
ts are uniquely  
ered using the  
n humans, and  
ate Center, has  
systematic ob-

empathy, both  
e same lines as  
from someone  
sing their fear.  
resentation," a  
predicament.  
irror neurons;  
ntagion and so  
on no special-  
on what we are  
hare what they

one of the hap-  
ment from the  
es virtually the

identical circuitry for these two mental acts.<sup>20</sup> In other words, to understand what someone else experiences—to empathize—we utilize the same brain wiring that is active during our own experience.<sup>21</sup>

All communication requires that what matters for the sender also matters for the receiver. By sharing thoughts as well as feelings, two brains deploy a shorthand that gets both people on the same page immediately, without having to waste time or words explaining more pointedly what matters are at hand.<sup>22</sup>

Mirroring occurs whenever our perception of someone automatically activates an image or a felt sense in our own brain for what they are doing and expressing.<sup>23</sup> What's on their mind occupies ours. We rely on these inner messages to sense what might be going on in the other person. After all, what does a smile or a wink, a stare or a frown, "mean," except as a clue to what's happening in the other person's mind?

## AN ANCIENT DEBATE

Today most people remember the seventeenth-century philosopher Thomas Hobbes for his assertion that life in our natural state—absent any strong government—is "nasty, brutish and short," a war of all against all. Despite this tough, cynical view, however, Hobbes himself had a soft side.

One day as he walked through the streets of London, he came upon an old, sickly man who was begging for alms. Hobbes, his heart touched, immediately gave the man a generous offering.

When asked by a friend if he would have done the same had there been no religious dictum or philosophical principle about helping the needy, Hobbes replied that he would. His explanation: he felt some pain himself when he saw the man's misery, and so just as giving alms to the man would relieve some of the man's suffering, it "doth also ease me."<sup>24</sup>

This tale suggests that we have a bit of self-interest in relieving the misery of others. One school of modern economic theory, following Hobbes, argues that people give to charities in part because of the pleasure they get from imagining either the relief of those they benefit or their own relief from alleviating their sympathetic distress.

Latter-day versions of this theory have tried to reduce acts of altruism to disguised acts of self-interest.<sup>25</sup> In one version, compassion veils a "selfish gene" that tries to maximize its odds of being

passed on by gathering obligations or by favoring the close relatives who carry it.<sup>26</sup> Such explanations may suffice in special cases.

But another viewpoint offers a more immediate—and universal—explanation: as the Chinese sage Mengzi (or Mencius) wrote in the third century B.C.E., long before Hobbes, “All men have a mind which cannot bear to see the suffering of others.”<sup>27</sup>

Neuroscience now supports Mengzi’s position, adding missing data to this centuries-old debate. When we see someone else in distress, similar circuits reverberate in our brain, a kind of hardwired empathic resonance that becomes the prelude to compassion. If an infant cries, her parents’ brains reverberate in much the same way, which in turn automatically moves them to do something to soothe their baby’s distress.

Our brain has been preset for kindness. We automatically go to the aid of a child who is screaming in terror; we automatically want to hug a smiling baby. Such emotional impulses are “prepotent”: they elicit reactions in us that are unpremeditated and instantaneous. That this flow from empathy to action occurs with such rapid automaticity hints at circuitry dedicated to this very sequence. To feel distress stirs an urge to help.

When we hear an anguished scream, it activates the same parts of our brain that experience such anguish, as well as the premotor cortex, a sign we are preparing to act. Similarly, hearing someone tell an unhappy story in doleful tones activates the listener’s motor cortex—which guides movements—as well as the amygdala and related circuits for sadness.<sup>28</sup> This shared state then signals the motor area of the brain, where we prepare our response, for the relevant action. Our initial perception prepares us for action: to see readies us to do.<sup>29</sup>

The neural networks for perception and action share a common code in the language of the brain. This shared code allows whatever we perceive to lead almost instantly to the appropriate reaction. Seeing an emotional expression, hearing a tone of voice, or having our attention directed to a given topic instantly fires the neurons that that message indicates.

This shared code was anticipated by Charles Darwin, who back in 1872 wrote a scholarly treatise on emotions that scientists still regard highly.<sup>30</sup> Although Darwin wrote about empathy as a survival factor, a popular misreading of his evolutionary theories emphasized “nature red in tooth and claw” (as Tennyson phrased the notion of a relentless culling of the weak), a notion favored by “social Darwinists,” who twisted evolutionary thinking to rationalize greed.

Darwin saw every emotion as a predisposition to act in a unique way: fear, to freeze or flee; anger, to fight; joy, to embrace; and so on. Brain imaging studies now show that at the neural level he was right. To feel *any* emotion stirs the related urge to act.

The low road makes that feeling-action link interpersonal. For instance, when we see someone expressing fear—even if only in the way they move or hold their body—our own brain activates the circuitry for fear. Along with this instantaneous contagion, the brain areas that prepare for fearful actions also activate. And so with each emotion—anger, joy, sadness, and so on. Emotional contagion, then, does more than merely spread feelings—it automatically prepares the brain for appropriate action.<sup>31</sup>

Nature's rule of thumb holds that a biological system should use the minimal amount of energy. Here the brain achieves that efficiency by firing the same neurons while both perceiving and performing an action. That economizing repeats across brains. In the special case of someone in distress, the perception-action link makes coming to their aid the brain's natural tendency. To feel *with* stirs us to act *for*.

To be sure, some data suggest in many situations that people tend to favor helping their loved ones over helping a stranger. Even so, emotional attunement with a stranger in distress moves us to help that person just as we would our loved ones. For instance, in one study the more saddened people were by the plight of a displaced orphan, the more likely they were to donate money or even offer the child a temporary place to live—regardless of how much social distance they felt.

The preference for helping those similar to ourselves washes away when we are face-to-face with someone in agony or dire straits. In a direct encounter with such a person the primal brain-to-brain link makes us experience their suffering as our own—and to immediately prepare to help.<sup>32</sup> And that direct confrontation with suffering was once the rule in human affairs, in the vast period when encounters were always within feet or yards, rather than at the artificial removes of modern life.

Back to that quandary of why—if the human brain contains a system designed to attune us to someone else's distress and prepare us to act to help—we don't always help. The possible answers are manifold, enumerated by countless experiments in social psychology. But the simplest answer may be that modern life militates against it: we largely relate to those in need at a distance. That separation means we experience "cognitive" empathy rather than the

immediacy of direct emotional contagion. Or worse, we have mere sympathy, where we feel sorry for the person but do not taste their distress in the least.<sup>33</sup> This more removed relationship weakens the innate impulse to help.

As Preston and de Waal note, "In today's era of e-mail, commuting, frequent moves, and bedroom communities, the scales are increasingly tipped against the automatic and accurate perception of others' emotional state, without which empathy is impossible." Modern-day social and virtual distances have created an anomaly in human living, though one we now take to be the norm. This separation mutes empathy, absent which altruism falters.

The argument has long been made that we humans are by nature compassionate and empathic despite the occasional streak of meanness, but torrents of bad news through history have contradicted that claim, and little sound science has backed it. But try this thought experiment. Imagine the number of opportunities people around the world today *might* have to commit an antisocial act, from rape or murder to simple rudeness and dishonesty. Make that number the bottom of a fraction. Now for the top value, put the number of such antisocial acts that will *actually* occur today.

That ratio of potential to enacted meanness holds at close to zero any day of the year. And if for the top value you put the number of benevolent acts performed in a given day, the ratio of kindness to cruelty will be always be positive. (The news, however, comes to us as though that ratio was reversed.)

Harvard's Jerome Kagan proposes this mental exercise to make a simple point about human nature: the sum total of goodness vastly outweighs that of meanness. "Although humans inherit a biological bias that permits them to feel anger, jealousy, selfishness and envy, and to be rude, aggressive or violent," Kagan notes, "they inherit an even stronger biological bias for kindness, compassion, cooperation, love and nurture—especially toward those in need." This in-built ethical sense, he adds, "is a biological feature of our species."<sup>34</sup>

With the discovery that our neural wiring tips toward putting empathy in the service of compassion, neuroscience hands philosophy a mechanism for explaining the ubiquity of the altruistic impulse. Instead of trying to explain away selfless acts, philosophers might contemplate the conundrum of the innumerable times that cruel acts are absent.<sup>35</sup>