who are unusually aggressive: they act on the basis of the assumption of hostility or threat, paying too little attention to what is actually going on. Once they assume threat, they leapfrog to action. For instance, if an aggressive boy is playing checkers with another who moves a piece out of turn, he'll interpret the move as "cheating" without pausing to find out if it had been an innocent mistake. His presumption is of malevolence rather than innocence; his reaction is automatic hostility. Along with the knee-jerk perception of a hostile act is entwined an equally automatic aggression; instead of, say, pointing out to the other boy that he made a mistake, he will jump to accusation, yelling, hitting. And the more such children do this, the more automatic aggression becomes for them, and the more the repertoire of alternatives—politeness, joking—shrinks.

Such children are emotionally vulnerable in the sense that they have a low threshold for upset, getting peeved more often by more things; once upset, their thinking is muddled, so that they see benign acts as hostile and fall back on their overlearned habit of striking out.<sup>13</sup>

These perceptual biases toward hostility are already in place by the early grades. While most children, and especially boys, are rambunctious in kindergarten and first grade, the more aggressive children fail to learn a modicum of self-control by second grade. Where other children have started to learn negotiation and compromise for playground disagreements, the bullies rely more and more on force and bluster. They pay a social price: within two or three hours of a first playground contact with a bully, other children already say they dislike him.<sup>14</sup>

But studies that have followed children from the preschool years into the teenage ones find that up to half of first graders who are disruptive, unable to get along with other kids, disobedient with their parents, and resistant with teachers will become delinquents in their teen years. Of course, not all such aggressive children are on the trajectory that leads to violence and criminality in later life. But of all children, these are the ones most at risk for eventually committing violent crimes.

The drift toward crime shows up surprisingly early in these children's lives. When children in a Montreal kindergarten were rated for hostility and troublemaking, those highest at age five already had far greater evidence of delinquency just five to eight years later, in their early teens. They were about three times as likely as other

children to admit they had beaten up someone who had not done anything to them, to have shoplifted, to have used a weapon in a fight, to have broken into or stolen parts from a car, and to have been drunk—and all this before they reached fourteen years of age.<sup>16</sup>

The prototypical pathway to violence and criminality starts with children who are aggressive and hard to handle in first and second grade. 17 Typically, from the earliest school years their poor impulse control also contributes to their being poor students, seen as, and seeing themselves as, "dumb"—a judgment confirmed by their being shunted to special-education classes (and though such children may have a higher rate of "hyperactivity" or learning disorders, by no means all do). Children who on entering school already have learned in their homes a "coercive" style—that is, bullying—are also written off by their teachers, who have to spend too much time keeping the children in line. The defiance of classroom rules that comes naturally to these children means that they waste time that would otherwise be used in learning; their destined academic failure is usually obvious by about third grade. While boys on a trajectory toward delinquency tend to have lower IQ scores than their peers, their impulsivity is more directly at cause: impulsivity in ten-year-old boys is almost three times as powerful a predictor of their later delinquency as is their IO.<sup>18</sup>

By fourth or fifth grade these kids—by now seen as bullies or just "difficult"—are rejected by their peers and are unable to make friends easily, if at all, and have become academic failures. Feeling themselves friendless, they gravitate to other social outcasts. Between grade four and grade nine they commit themselves to their outcast group and a life of defying the law: they show a fivefold increase in their truancy, drinking, and drug taking, with the biggest boost between seventh and eighth grade. By the middle-school years, they are joined by another type of "late starters," who are attracted to their defiant style; these late starters are often youngsters who are completely unsupervised at home and have started roaming the streets on their own in grade school. In the high-school years this outcast group typically drops out of school in a drift toward delinquency, engaging in petty crimes such as shoplifting, theft, and drug dealing.

(A telling difference emerges in this trajectory between boys and girls. A study of fourth-grade girls who were "bad"—getting in trouble with teachers and breaking rules, but not unpopular with their peers—found that 40 percent had a child by the time they finished the

high-school years.<sup>19</sup> That was three times the average pregnancy rate for girls in their schools. In other words, antisocial teenage girls don't get violent—they get pregnant.)

There is, of course, no single pathway to violence and criminality, and many other factors can put a child at risk: being born in a high-crime neighborhood where they are exposed to more temptations to crime and violence, coming from a family under high levels of stress, or living in poverty. But none of these factors makes a life of violent crime inevitable. All things being equal, the psychological forces at work in aggressive children greatly intensify the likelihood of their ending up as violent criminals. As Gerald Patterson, a psychologist who has closely followed the careers of hundreds of boys into young adulthood, puts it, "the anti-social acts of a five-year-old may be prototypic of the acts of the delinquent adolescent."<sup>20</sup>

## **SCHOOL FOR BULLIES**

The bent of mind that aggressive children take with them through life is one that almost ensures they will end up in trouble. A study of juvenile offenders convicted of violent crimes and of aggressive high-school students found a common mind-set: When they have difficulties with someone, they immediately see the other person in an antagonistic way, jumping to conclusions about the other person's hostility toward them without seeking any further information or trying to think of a peaceful way to settle their differences. At the same time, the negative consequence of a violent solution—a fight, typically—never crosses their mind. Their aggressive bent is justified in their mind by beliefs like, "It's okay to hit someone if you just go crazy from anger"; "If you back down from a fight everyone will think you're a coward"; and "People who get beaten up badly don't really suffer that much."<sup>21</sup>

But timely help can change these attitudes and stop a child's trajectory toward delinquency; several experimental programs have had some success in helping such aggressive kids learn to control their antisocial bent before it leads to more serious trouble. One, at Duke University, worked with anger-ridden grade-school troublemakers in training sessions for forty minutes twice a week for six to twelve weeks. The boys were taught, for example, to see how some of the social cues they interpreted as hostile were in fact neutral or friendly.

They learned to take the perspective of other children, to get a sense of how they were being seen and of what other children might be thinking and feeling in the encounters that had gotten them so angry. They also got direct training in anger control through enacting scenes, such as being teased, that might lead them to lose their temper. One of the key skills for anger control was monitoring their feelings—becoming aware of their body's sensations, such as flushing or muscle tensing, as they were getting angry, and to take those feelings as a cue to stop and consider what to do next rather than strike out impulsively.

John Lochman, a Duke University psychologist who was one of the designers of the program, told me, "They'll discuss situations they've been in recently, like being bumped in the hallway when they think it was on purpose. The kids will talk about how they might have handled it. One kid said, for example, that he just stared at the boy who bumped him and told him not to do it again, and walked away. That put him in the position of exerting some control and keeping his self-esteem, without starting a fight."

This appeals; many such aggressive boys are unhappy that they lose their temper so easily, and so are receptive to learning to control it. In the heat of the moment, of course, such cool-headed responses as walking away or counting to ten so the impulse to hit will pass before reacting are not automatic; the boys practice such alternatives in role-playing scenes such as getting on a bus where other kids are taunting them. That way they can try out friendly responses that preserve their dignity while giving them an alternative to hitting, crying, or running away in shame.

Three years after the boys had been through the training, Lochman compared these boys with others who had been just as aggressive, but did not have the benefit of the anger-control sessions. He found that, in adolescence, the boys who graduated from the program were much less disruptive in class, had more positive feelings about themselves, and were less likely to drink or take drugs. And the longer they had been in the program, the less aggressive they were as teenagers.

## PREVENTING DEPRESSION

Dana, sixteen, had always seemed to get along. But now, suddenly, she just could not relate with other girls, and, more troubling for her, she could not find a way to hold on

to boyfriends, even though she slept with them. Morose and constantly fatigued, Dana lost interest in eating, in having fun of any kind; she said she felt hopeless and helpless to do anything to escape her mood, and was thinking of suicide.

The drop into depression had been triggered by her most recent breakup. She said she didn't know how to go out with a boy without getting sexually involved right away —even if she was uncomfortable about it—and that she did not know how to end a relationship even if it was unsatisfying. She went to bed with boys, she said, when all she really wanted to do was get to know them better.

She had just moved to a new school, and felt shy and anxious about making friends with girls there. For instance, she held back from starting conversations, only talking once someone spoke to her. She felt unable to let them know what she was like, and didn't even feel she knew what to say after "Hello, how are you?"<sup>22</sup>

Dana went for therapy to an experimental program for depressed adolescents at Columbia University. Her treatment focused on helping her learn how to handle her relationships better: how to develop a friendship, how to feel more confident with other teens, how to assert limits on sexual closeness, how to be intimate, how to express her feelings. In essence, it was a remedial tutorial in some of the most basic emotional skills. And it worked; her depression lifted.

Particularly in young people, problems in relationships are a trigger for depression. The difficulty is as often in children's relationships with their parents as it is with their peers. Depressed children and teenagers are frequently unable or unwilling to talk about their sadness. They seem unable to label their feelings accurately, showing instead a sullen irritability, impatience, crankiness, and anger—especially toward their parents. This, in turn, makes it harder for their parents to offer the emotional support and guidance the depressed child actually needs, setting in motion a downward spiral that typically ends in constant arguments and alienation.

A new look at the causes of depression in the young pinpoints deficits in two areas of emotional competence: relationship skills, on the one hand, and a depression-promoting way of interpreting setbacks, on the other. While some of the tendency to depression almost certainly is due to genetic destiny, some of that tendency seems due to reversible, pessimistic habits of thought that predispose children to react to life's small defeats—a bad grade, arguments with parents, a social rejection—by becoming depressed. And there is evidence to suggest that the predisposition to depression, whatever its basis, is becoming ever more widespread among the young.

## A COST OF MODERNITY: RISING RATES OF DEPRESSION

These millennial years are ushering in an Age of Melancholy, just as the twentieth century became an Age of Anxiety. International data show what seems to be a modern epidemic of depression, one that is spreading side by side with the adoption throughout the world of modern ways. Each successive generation worldwide since the opening of the century has lived with a higher risk than their parents of suffering a major depression—not just sadness, but a paralyzing self-pity, dejection, and overwhelming listlessness. and an hopelessness—over the course of life.<sup>23</sup> And those episodes are beginning at earlier and earlier ages. Childhood depression, once virtually unknown (or, at least, unrecognized) is emerging as a fixture of the modern scene.

Although the likelihood of becoming depressed rises with age, the greatest increases are among young people. For those born after 1955 the likelihood they will suffer a major depression at some point in life is, in many countries, three times or more greater than for their grandparents. Among Americans born before 1905, the rate of those having a major depression over a lifetime was just 1 percent; for those born since 1955, by age twenty-four about 6 percent had become depressed. For those born between 1945 and 1954, the chances of having had a major depression before age thirty-four are ten times greater than for those born between 1905 and 1914.<sup>24</sup> And for each generation the onset of a person's first episode of depression has tended to occur at an ever-earlier age.

A worldwide study of more than thirty-nine thousand people found the same trend in Puerto Rico, Canada, Italy, Germany, France, Taiwan, Lebanon, and New Zealand. In Beirut, the rise of depression tracked political events closely, the upward trends rocketing during periods of civil war. In Germany, for those born before 1914 the rate of depression by age thirty-five is 4 percent; for those born in the decade before 1944 it is 14 percent at age thirty-five. Worldwide, generations that came of age during politically troubled times had higher rates of depression, though the overall upward trend holds apart from any political events.

The lowering into childhood of the age when people first experience depression also seems to hold worldwide. When I asked experts to hazard a guess as to why, there were several theories.

Dr. Frederick Goodwin, then director of the National Institute of

Mental Health, speculated, "There's been a tremendous erosion of the nuclear family—a doubling of the divorce rate, a drop in parents' time available to children, and an increase in mobility. You don't grow up knowing your extended family much anymore. The losses of these stable sources of self-identification mean a greater susceptibility to depression."

Dr. David Kupfer, chairman of psychiatry at the University of Pittsburgh medical school, pointed to another trend: "With the spread of industrialization after World War II, in a sense nobody was home anymore. In more and more families there has been growing parental indifference to children's needs as they grow up. This is not a direct cause of depression, but it sets up a vulnerability. Early emotional stressors may affect neuron development, which can lead to a depression when you are under great stress even decades later."

Martin Seligman, the University of Pennsylvania psychologist, proposed: "For the last thirty or forty years we've seen the ascendance of individualism and a waning of larger beliefs in religion, and in supports from the community and extended family. That means a loss of resources that can buffer you against setbacks and failures. To the extent you see a failure as something that is lasting and which you magnify to taint everything in your life, you are prone to let a momentary defeat become a lasting source of hopelessness. But if you have a larger perspective, like a belief in God and an afterlife, and you lose your job, it's just a temporary defeat."

Whatever the cause, depression in the young is a pressing problem. In the United States, estimates vary widely for how many children and teens are depressed in any given year, as opposed to vulnerability over their lifetime. Some epidemiological studies using strict criteria—the official diagnostic symptoms for depression—have found that for boys and girls between ten and thirteen the rate of major depression over the course of a year is as high as 8 or 9 percent, though other studies place it at about half that rate (and some as low as about 2 percent). At puberty, some data suggest, the rate nearly doubles for girls; up to 16 percent of girls between fourteen and sixteen suffer a bout of depression, while the rate is unchanged for boys.<sup>25</sup>

That depression should not just be treated, but *prevented*, in children is clear from an alarming discovery: Even mild episodes of depression in a child can augur more severe episodes later in life.<sup>26</sup> This challenges the old assumption that depression in childhood does not matter in the long run, since children supposedly "grow out of it." Of course, every child gets sad from time to time; childhood and adolescence are, like adulthood, times of occasional disappointments and losses large and small with the attendant grief. The need for prevention is not for these times, but for those children for whom sadness spirals downward into a gloom that leaves them despairing, irritable, and withdrawn—a far more severe melancholy.

Among children whose depression was severe enough that they were referred for treatment, three quarters had a subsequent episode of severe depression, according to data collected by Maria Kovacs, a psychologist at Western Psychiatric Institute and Clinic in Pittsburgh.<sup>27</sup> Kovacs studied children diagnosed with depression when they were as young as eight years old, assessing them every few years until some were as old as twenty-four.

The children with major depression had episodes lasting about eleven months on average, though in one in six of them it persisted for as long as eighteen months. Mild depression, which began as early as age five in some children, was less incapacitating but lasted far longer—an average of about four years. And, Kovacs found, children who have a minor depression are more likely to have it intensify into major depression—a so-called double depression. Those who develop double depression are much more prone to suffer recurring episodes as the years go on. As children who had an episode of depression grew into adolescence and early adulthood, they suffered from depression or manic-depressive disorder, on average, one year in three.

The cost to children goes beyond the suffering caused by depression itself. Kovacs told me, "Kids learn social skills in their peer relations—for example, what to do if you want something and aren't getting it, seeing how other children handle the situation and then trying it yourself. But depressed kids are likely to be among the neglected children in a school, the ones other kids don't play with much."<sup>28</sup>

The sullenness or sadness such children feel leads them to avoid initiating social contacts, or to look away when another child is trying to engage them—a social signal the other child only takes as a rebuff; the end result is that depressed children end up rejected or neglected on the playground. This lacuna in their interpersonal experience

means they miss out on what they would normally learn in the roughand-tumble of play, and so can leave them social and emotional laggards, with much catching up to do after the depression lifts.<sup>29</sup> Indeed, when depressed children have been compared to those without depression, they have been found to be more socially inept, to have fewer friends, to be less preferred than others as playmates, to be less liked, and to have more troubled relationships with other children.

Another cost to these children is doing poorly in school; depression interferes with their memory and concentration, making it harder to pay attention in class and retain what is taught. A child who feels no joy in anything will find it hard to marshal the energy to master challenging lessons, let alone experience flow in learning. Understandably, the longer children in Kovacs's study were depressed, the more their grades dropped and the poorer they did on achievement tests, so that they were more likely to be held back in school. In fact, there was a direct correlation between the length of time a child had been depressed and his grade-point average, with a steady plummet over the course of the episode. All of this academic rough going, of course, compounds the depression. As Kovacs observes, "Imagine you're already feeling depressed, and you start flunking out of school, and you sit home by yourself instead of playing with other kids."

## **DEPRESSIONOGENIC WAYS OF THOUGHT**

Just as with adults, pessimistic ways of interpreting life's defeats seem to feed the sense of helplessness and hopelessness at the heart of children's depression. That people who are *already* depressed think in these ways has long been known. What has only recently emerged, though, is that children who are most prone to melancholy tend toward this pessimistic outlook *before* they become depressed. This insight suggests a window of opportunity for inoculating them against depression before it strikes.

One line of evidence comes from studies of children's beliefs about their own ability to control what happens in their lives—for example, being able to change things for the better. This is assessed by children's ratings of themselves in such terms as "When I have problems at home I'm better than most kids at helping to solve the

problems" and "When I work hard I get good grades." Children who say none of these positive descriptions fits them have little sense that they can do anything to change things; this sense of helplessness is highest in those children who are most depressed.<sup>30</sup>

A telling study looked at fifth and sixth graders in the few days after they received report cards. As we all remember, report cards are one of the greatest sources of elation and despair in childhood. But researchers find a marked consequence in how children assess their role when they get a worse grade than they expected. Those who see a bad grade as due to some personal flaw ("I'm stupid") feel more depressed than those who explain it away in terms of something they could change ("If I work harder on my math homework I'll get a better grade").<sup>31</sup>

Researchers identified a group of third, fourth, and fifth graders whom classmates had rejected, and tracked which ones continued to be social outcasts in their new classes the following year. How the children explained the rejection to themselves seemed crucial to whether they became depressed. Those who saw their rejection as due to some flaw in themselves grew more depressed. But the optimists, who felt that they could do something to change things for the better, were not especially depressed despite the continuing rejection.<sup>32</sup> And in a study of children making the notoriously stressful transition to seventh grade, those who had the pessimistic attitude responded to high levels of hassles at school and to any additional stress at home by becoming depressed.<sup>33</sup>

The most direct evidence that a pessimistic outlook makes children highly susceptible to depression comes from a five-year study of children beginning when they were in third grade.<sup>34</sup> Among the younger children, the strongest predictor that they would become depressed was a pessimistic outlook coupled with a major blow such as parents divorcing or a death in the family, which left the child upset, unsettled, and, presumably, with parents less able to offer a nurturing buffer. As the children grew through the elementary-school years, there was a telling shift in their thinking about the good and bad events of their lives, with the children increasingly ascribing them to their own traits: "I'm getting good grades because I'm smart"; "I don't have many friends because I'm no fun." This shift seems to set in gradually over the third to fifth grades. As this happens those children who develop a pessimistic outlook—attributing the setbacks in their lives to some dire flaw in themselves—begin to fall prey to depressed