

CHAPTER 3

Disruptive Behaviors

Should We Foster or Prevent Resiliency?

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“Unless you give infants everything they want, they cry and get angry, they even beat their own parents . . . Thus an evil man is rather like a sturdy boy” (Hobbes, 1641/1998, p. 11)

As I start this chapter, we have been struck by three important epidemics. The first was the outbreak of the Severe Acute Respiratory Syndrome (SARS) in the winter of 2003. The second is the “show your belly button fashion” (SBBF) that I started to notice last May when the weather was finally getting warmer and women could walk on the streets of Montreal without a fur coat. The third is the use of the word “resiliency” by the media gurus and all those who are afraid of SARS but dying to show-off their belly buttons.

The confusion concerning a word adopted by academic psychologists to describe their scientific progress is not new. At the last 20th century International Congress of Psychology, held in Stockholm in 2000, I had a discussion with David Magnusson on the advancement of knowledge in developmental psychology. David made important contributions through his pioneering longitudinal studies (e.g., Magnusson, Dunér, & Zetterblom, 1975; Magnusson, Klinteberg, & Stattin, 1992), his theoretical development of person-context interaction (Magnusson, 1988; Magnusson & Stattin, 1998), and his methodological innovations (Magnusson & Bergman, 1990). He was also chairman of one of the prestigious Nobel prize committees. At one point in our conversation, he suggested that most of what appeared to be “new” in psychology was mainly putting new words on old facts. We need words to think and communicate, but words are simplifications of reality, and when words used

by scientists become buzz words, they can confuse more than clarify. SARS and belly buttons appear to be concrete, objective observations, but what is “resilience”?

My main area of research has been the development of disruptive behavior from childhood to adulthood, and I have focused more specifically on physical aggression. When I started to study the development of disruptive behavior, without being clearly conscious of the fact, I was somewhat following a social learning approach (e.g., Bandura, 1973). With a group of colleagues, I initiated a longitudinal study to understand how some kindergarten children from poor inner-city areas became “delinquents” while others did not. To use the term that became a buzz word in the late 1980s, I was looking for the factors that could explain the “onset” of delinquency (Tremblay, Pihl, Vitaro, & Dobkin, 1994). I probably had in mind that some were “resilient” with regard to the bad influence of peers or to the surge of testosterone during adolescence (e.g., Schaal, Tremblay, Soussignan, & Susman, 1996; Tremblay, Mâsse, Vitaro, & Dobkin, 1995; Vitaro, Tremblay, Kerr, Pagani-Kurtz, & Bukowski, 1997). It was certainly part of my thinking that parents could be both protective and risk factors, since a large part of the study was meant to assess the quality of the parent-child interactions throughout the elementary school years (e.g., Lavigne, Saucier, & Tremblay, 1995; Lavigne, Tremblay, & Saucier, 1995).

But I clearly had no idea of the conclusions I would come to 15 years later. In fact, when we started to see that things were not what we expected they would be, my reaction was far from open-minded. I still remember a meeting, probably in the fall of 1988, when my colleague Marc Leblanc, a criminologist who had never studied humans younger than 12 years of age, described the results of the analyses he had done of the self-reported delinquency questionnaire we had given to the 1,037 boys we had been following since their kindergarten year. We were asking them if they had *ever* exhibited any of 27 “delinquent” behaviors, and if they answered “yes,” at what age that particular behavior had occurred for the first time. The boys’ self-reports were indicating relatively high rates of “delinquency” in that sample from schools in low socioeconomic areas. We had started to ask these questions concerning “delinquent” acts at 10 years of age because we were hoping to catch them before they initiated (onset) their delinquent activities. There is in fact a law in Canada that a child cannot be deemed a “delinquent” before 12 years old! We of course expected that some would break that law, but since they were only 10 years old, I was worried that they did not really understand the questions, or that they simply were having fun making us believe that they were doing the bad things that they were seeing their older brothers and neighbors doing. In other words,

I had the impression that we were not getting reliable reports of their true behavior.

With the 10-year-olds, we were using a questionnaire that had been designed to study delinquent behavior in adolescents, and I was saying to my criminologist colleague, who appeared to be coming from another planet, that he should not take these answers too seriously. It worried me even more when he showed us the results concerning the age at which the boys were saying they had started to commit these “delinquent” acts (the “age of onset” concept). The colleague who came from the world of adolescent and adult criminals was telling us that some 10-year-old boys were reporting that they had started, at age 4 and 5, to use weapons in fights, to steal goods worth more than \$100, as well as to steal following breaking and entering. I distinctly remember my outrage. How could he be so naïve and believe that he was getting reliable answers? Not only were we using with 10-year-olds an instrument created for adolescents, but we were asking them to recall when they had started to do these things that we expected would start later. How could 10-year-olds remember what they were doing at 4? There were few boys who were reporting onset of these “serious” “delinquent” behaviors at age 4, but this was proof that, at least some of them did not understand the questions we were asking them, and thus they were still much too young for that self-reported delinquency instrument. I strongly appealed to him not to report these data, especially the ones on age of onset, since it would discredit the whole study. Well, at least a few reviewers and an editor of a serious scientific journal had a less sanguine reaction than I had, and the results were eventually published (Leblanc et al., 1991). But, as with most of our great scholarly publications, it did not get much attention (eight citations up to October 2003), and thus my fear of the longitudinal study being discredited was, in hindsight, exaggerated. I certainly could not foresee at that time that 10 years later we would be publishing results that would be much more outrageous.

THE CONCEPT OF “RESILIENCE”

The word “resilience” has spread in the world of psychology and psychiatry like an epidemic. We do not know exactly what it is, but it is a nice word, it appears to refer to something concrete that we would all like to have, and the epidemic process appears to be working, as people who have been in contact with it use the “resilience” word. The best sign that the “resiliency” epidemic knows no frontier is that France has been severely hit, although there is relatively little contact between French psychologists and Anglo-Saxon psychologists. As I write these

words in September 2003, a large proportion of the inhabitants of France seem to be attributing their ups and downs in life to their “resilience,” or lack of (Tisseron, 2003). Books on “resilience” are instantaneous best sellers. Every television and radio program dealing with human behavior uses the concept to explain all that goes well or goes wrong. Every health-minded French citizen wants to know how he can increase his “resilience”; and every psychologist, psychiatrist, counselor, nutritionist, chiropractor, massage therapist, physiotherapist, osteopath, acupuncturist, and so on, is selling the magic formula.

I agreed to write this chapter because I wanted to reflect on this fad, and thought that I could possibly help in understanding what we are talking about. However, I must admit that as I write these words I have not closely followed the debates concerning the concept of “resilience,” and I am far from being certain what people mean when they are using the word. I read that Werner and Smith (1982, p. 36) used Webster’s *New Collegiate Dictionary* definition of resilience: 1. The capability of a strained body to recover its size and shape after deformation caused especially by compressive stress. 2. An ability to recover from or adjust easily to misfortune or change. According to Murray (2003), participants at the 2003 American Psychological Association Annual Meeting were being asked to take home the message that “Resilience is not something we are born with—it’s a set of learned behaviors, and it takes strategizing to build.”

Intuitively, the concept appears to apply relatively well to some physical illnesses, and some mental illnesses. An illness appears at a certain point in time (onset), after the person has been attacked, for example, by a virus or a psychologically traumatic event. Some individuals will become ill and others will not. Those who do not become ill can be considered resilient. Among those who become ill, some will not recover their healthy state, while others will. The “resiliency” label also appears to be applied to the latter. One can try to build resiliency with regard to some viruses and some trauma, for example, by taking vitamins and following the APA Practice Directorate’s public education campaign “Road to Resilience”! These efforts to increase resiliency can be considered preventive interventions. However, it seems very likely that humans are born with individual differences in resilience regarding attacks from viruses and traumatic events.

This developmental perspective concerning physical illnesses and some mental illnesses (e.g., depression) seems to work well. It is very obvious that health generally declines with age. Overall, children and adolescents are much healthier than adults, and young adults are much healthier than older adults. Thus, except for illnesses that we are born

with, illnesses “onset” at a certain age. However, some humans are less ill than others throughout their lives, and some appear to simply die of old age, after a healthy life. Although they live in the same environment as others who become miserably sick and die young, their bodies resist the invasions of bacteria, microbes, and viruses. Some smoke like chimneys and die without a trace of cancer, others drink like sponges and celebrate their 100th anniversary standing straight and tall while listening to the crowd sing “God Save the Queen.” These fortunate people have been labeled “resilient” after the fact. In spite of the adversity that they had to endure, or that they brought upon themselves, they did not lose their health, or if they did, it was momentary, and they bounced back. Like a resilient piece of rubber, they bounced back to their original healthy state after having been hit by an agent that creates an illness. How well does this perspective apply to disruptive behaviors?

THE DEVELOPMENT OF DISRUPTIVE BEHAVIORS

Disruptive behavior generally refers to three sub-groups of behaviors: physical aggression, hyperactivity (intense motor activity) and oppositional behavior. I believe that most of the work on these three topics, until recently, was based on the idea that children start to exhibit these behaviors (onset) as they grow older. For example, the classic work of Bandura, Ross, and Ross (1961; see also Bandura, 1973) on aggression indicated that children learn to physically aggress others by imitation. The more they witness physical aggression, the more likely they are to learn to use it. This is why television would apparently be such a powerful cause of the physical aggression we see in our schools and our neighborhoods. It appears clear that physical aggression on television has substantially increased since television was made available to the public more than half a century ago, and each new generation of youth from industrialized countries has apparently been learning to physically aggress more than the previous one with the increase of physical aggression on television (Eron, 1982; Huesmann & Eron, 1986; Johnson, Cohen, Smailes, Kasen, & Brook, 2002). Obviously there are many who do not use much physical aggression, and those would be children who were either not exposed to violent television or who for some reason were resilient with regard to the social learning mechanisms of aggression through television viewing. Since children would also learn to physically aggress from aggressive parents, peers, and neighbors, those

who were exposed to these social learning factors and did not learn to physically aggress would also be considered resilient.

The work on oppositional behavior indicates a similar developmental pattern. According to at least three decades of observational work on children's aversive behaviors, they learn to be oppositional because their parents use inappropriate parenting behaviors (Patterson, 1982; Patterson, Reid, & Dishion, 1992). One would also expect that oppositional behavior is learned through social learning, and that peer influence and television play an important role, but I can't recall any empirical work done along these lines. On the other hand, although hyperactivity is strongly correlated to physical aggression and opposition (Farrington, Loeber, & Van Kammen, 1990; Lahey, McBurnett, & Loeber, 2000; Nagin & Tremblay, 1999), I have not seen any theory linking hyperactivity to television content or peer imitation. Because prescriptions for Ritalin tend to reach a peak for 9- to 10-year-old children (Romano, Baillargeon, Wu, Robaey, & Tremblay, 2002), one could hypothesize that, like aggression and opposition, hyperactivity is something you catch not long after you enter school. However, there have been suggestions that hyperactivity precedes antisocial behaviors such as aggression, and would even be one of the causes of antisocial behavior (e.g., Farrington et al., 1990; Moffitt, 1993).

Thus, if the development of physical aggression, opposition, and hyperactivity was like an illness that starts at a given point in time following an exposure to specific causal factors, the "resiliency" model would posit that some who are exposed get it, while others who are also exposed do not get it. I would argue that we should talk of "resilience" only if most of those who are exposed get it. The resilient ones would be a minority. On the other hand, if it is only a minority of those who are exposed who get it, then the "in" word should be "vulnerable."

Unfortunately, the development of physical aggression does not appear to follow the traditional model of an illness. I believe that we now have enough evidence to confirm that physical aggression, opposition, and hyperactivity are behaviors that appear during infancy in all normally developing children. Clearly, there is much inter-individual variability in the frequency of these behaviors, but infants do not appear to need to be exposed to violence on television, nor to be physically abused by their parents to initiate (onset) hitting, kicking, pushing, pulling, and biting others when angry or when they want to have something. These behaviors start at the end of the first year after birth, and humans appear to be at their peak in frequency of physical aggression between 24 and 42 months after birth (see Tremblay, 2003; and Figure 3-1). The same process appears to apply to opposition and hyperactivity. Children do not need to learn to say no nor learn to throw tantrums (e.g., Goodenough,

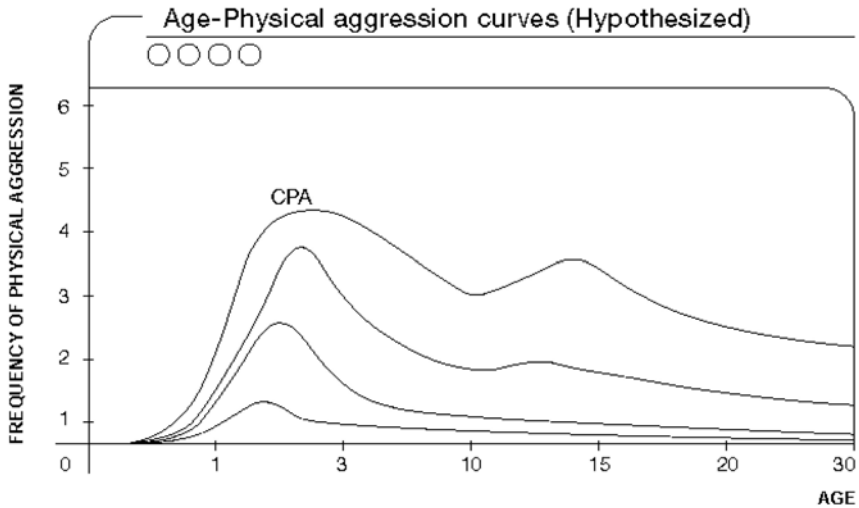


Figure 3-1 Age-physical aggression curves (Hypothesized) (CPA: Chronic physical aggression).

1931; Potegal, 2000). Data from a longitudinal study in Belgium indicates that the developmental trajectories in temper tantrums are very similar to the physical aggression trajectories (Sand, 1966; Tremblay & Nagin, in press). Children also do not need to learn to run. As soon as they start to stand firmly on their feet, they propel themselves on fast forward, using their legs and feet to keep going without stumbling, which they often do. If humans are at their peak in frequency of physical aggression and opposition during toddlerhood, they are also at their peak in frequency of running. This reminds me of an Italian colleague who once came to my house and after having observed squirrels in the garden said in amazement that these animals never walk. Indeed, young children are like squirrels, they run. And parents, rather than teaching them to run say many times a day “Don’t run, don’t run.” At the 2002 meeting of the International Society for Research on Aggression, Shaw, Lacourse, and Nagin (2002) presented trajectories of hyperactivity during early childhood that matched almost perfectly the trajectories of physical aggression during that period.

In summary, disruptive behaviors such as physical aggression, opposition, and hyperactivity are at their peak in frequency during the toddler years. The expression “the terrible twos” probably stuck because it summarizes a phenomenon that all those who have spent some time with young children recognize. From the developmental trajectory work on these behaviors, which started only a few years ago (see

Nagin & Tremblay, 1999), it does not appear that there is any substantial increase in frequency later on in development for any statistically significant group of children (e.g., Broidy et al., 2003; Coté, Tremblay, Nagin, Zoccolillo, & Vitaro, 2002; Shaw, Gilliom, Ingoldsby, & Nagin, 2003). Thus, onset occurs in early childhood long before exposure to violent television, deviant peers, and demanding school performance. And if onset is universal, there are no “resilient” children (in the sense of children who would not exhibit onset of physical aggression, opposition, and hyperactivity) except possibly children who are physically sick to the point that they don’t have the energy to do what normal children do.

THE SOCIALIZATION PERSPECTIVE

I have come to the conclusion that what we call disruptive problems are in fact resilience problems, but in the opposite meaning to the one given by “modern” psychology and psychiatry. In fact, after following the development of children for 20 years, I am simply saying what Thomas Hobbes (1641/1998) stated very clearly almost 400 years ago in his insightful treaty on social life and how humans become citizens: “an evil man is rather like a sturdy boy.” Disruptive school children, adolescents, and adults are resilient children, they have resisted the socialization process, they remain in their original form. In fact they all eventually become less physically aggressive, less oppositional, and less active, but compared to others they behave more like children, they have remained, more than others, in their “primitive” state. If in the physical illness domain a resilient individual is one whose physiology resists longer to the wear and tear of biological life, in the domain of disruptive behavior the resilient individual is one who is resistant longer to the socialization pressures.

The socialization challenge lies in keeping the energy of the toddler years while channelling them so that they fit in the social fabric. Some children are born with a biological makeup that will easily bend to the pressure of the environment. Yes, they hit, and kick, and run, and say no, but they quickly learn to inhibit these behaviors when they realize that when you hit you may be hit back, when you run you fall and hurt your knees, and when you say no you get a frowning face rather than a smiling face. Other children are born much more “resilient”, that is, harder to mold into the social fabric. To use the analogy that Steve Porges uses, they are born with a turbo motor (e.g., Porges, Doussard-Roosevelt, Portales, & Greenspan, 1996; Suomi, in press). When they want something they will cry until they get it, they will run until they catch you, and they will hit you if you don’t comply. From day one they are those on the

high-level trajectories of physical aggression, hyperactivity, and opposition. They need a very strong environment to get hold of themselves and learn that they must take into account those they are interacting with. Helping these children learn to “self-regulate” and not disrupt their social environment will be more of a challenge. Fortunately in most cases, and unfortunately in other cases, nature has evolved in such a way that children with turbo motors are more likely to have parents with turbo motors (e.g., Caspi et al., 2002; Dionne, Tremblay, Boivin, Laplante, & Pérusse, 2003; Lahey, Piacentini, McBurnett, & Stone, 1988; Rowe & Farrington, 1997). In the fortunate cases, these parents have learned to self-regulate and they will have both the energy and the skills to create an environment which will be appropriate for learning to self-regulate. In the unfortunate cases, the parents have not learned to self-regulate, and the environment they offer the child is so chaotic that the child will, like his parents, be “resilient” with regard to their erratic socialization pressures.

However, although trajectories appear to be set early (see Figure 3-1), we must realize that these trajectories are terrible simplifications of everyday behavior. The best analogy is the Dow-Jones index that investors look at everyday. If we had a daily index of a child’s frequency of oppositional behavior or physical aggression, we would see that from day to day it goes up and down, as if it was completely unpredictable. You start seeing some kind of logic only when you step back and look at trends over months and years. The trajectories of disruptive behaviors must be seen in this perspective. Children on the high trajectory of physical aggression are not getting up every morning and hitting everyone they meet during the day, and those on the low trajectory are not spending their days saying yes to all that is asked of them and never pushing others around. We are all born with a motor made to survive in the jungle, and to adapt somewhat to the social environment we are in. Successful socialization provides a veneer over the jungle fabric. I am always amazed to see that this veneer is sufficient to generate a relatively peaceful environment on the street, in public transportation, at the job. But we are all made of that resilient fabric which will unleash the tiger in us if we feel that we are in danger, or if we are prevented from getting something we strongly desire. This is why, if we listen to all the news that can be heard in one day, we will hear daily that someone who has always been a peaceful citizen, a good employee, and a supporting spouse killed his wife and children, or his boss and fellow employees. This is also the reason why prevention by early intervention will have long-term impacts, but will not eradicate the risk of the appearance of disruptive behaviors. We need societies that are constantly aware of the importance of situational prevention. The social fabric needs constant

lubrication, otherwise the veneer of some becomes scratched and the resilient fabric plays its role.

HELPING THE “RESILIENT” CHILDREN

If all adults are at risk of being at some point in time “robust children,” as Hobbes would say, we can imagine how difficult it is to “behave” for children who did not learn, or rather learned less well when they were young, how to behave in a socially accepted way. Can we help these “resilient” children once they are in the school system? My usual answer to this question is why wait until they get to school? We know that the factors that handicap the socialization process are already being put in place during pregnancy. We know that there are interventions that start during pregnancy and that show long-term impacts (Olds et al., 1998). We know that some interventions during the preschool years have also shown long-term impacts (e.g., Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001; Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002; Schweinhart, Barnes, & Weikart, 1993). Why wait until they are in school? I guess the answer should be that we are not waiting, that we are providing programs during pregnancy and the preschool years, but that these programs are not reaching all the children that need them, or that these programs are not sufficient for the most “resilient” children. Thus, support programs are needed during the elementary school years.

The Montreal Longitudinal Experimental Study was designed to test to what extent a multimodal intervention for disruptive boys in kindergartens of low socioeconomic area schools would have a long-term impact. When the intervention was planned in the early 1980s, parent training and social skills training were perceived as the alternative to the traditional psychodynamic approach to treating disruptive children (e.g., Meichenbaum, 1977; Michelson, Sugai, Wood, & Kazdin, 1983; Patterson, Reid, Jones, & Conger, 1975). Most experiments targeted either parenting skills or children’s social-cognitive skills (e.g., Lochman, Nelson, & Sims, 1981; Patterson et al., 1975). The interventions were also generally aimed at children older than 10 years of age and had a relatively short duration, usually less than 1 year, and often less than 6 months. To increase the chances of having a positive impact on the resilient fabric we decided to target younger children, as well as parents, to include well-adjusted peers, and to maintain the intervention for 2 years.

The parent-training component was based on a model developed at the Oregon Social Learning Center (Patterson, 1982; Patterson et al.,

1975). The procedure involved (a) giving parents a reading program, (b) training parents to monitor their children's behavior, (c) training parents to give positive reinforcement for prosocial behavior, (d) training parents to punish effectively without being abusive, (e) training parents to manage family crises, and (f) helping parents to generalize what they had learned. Having the professional who worked with a family meet the boy's teacher to discuss his adjustment and means of helping him complemented this component. Teachers, however, were generally not able to spend much time discussing teaching strategies for one child, and resources to implement a structured teacher-training program were not available.

Work with parents and teachers was carried out by two university-trained childcare workers, one psychologist, and one social worker, all working full-time. The professionals were trained for 10 months before the start of the program and received regular supervision for the duration of the experiment. Each of these professionals had a caseload of 12 families. The team was coordinated by a fifth professional who worked on the project part-time. Work with the parents was planned to last for 2 school years with one session every 2 or 3 weeks. The professionals, however, were free to decide that a given family needed more or fewer sessions at any given time. The maximum number of sessions given to any family was 46 and the mean number of sessions over the 2 years was 17.4, including families that refused to continue.

The social skills training component was implemented in the schools. One or two disruptive boys were included in groups of three to five peers who were identified by teachers as highly prosocial. The same group of professionals who conducted the parent training offered the social skills training during lunchtime. To create a team approach, different professionals were responsible for the parent and child training with each family. The two professionals responsible for a given family met regularly to discuss treatment strategy. The multidisciplinary team of professionals also met weekly to study a few cases. This helped maintain a consistent treatment approach. For the social skills training component of our intervention, two types of training were given to the disruptive boys within the small group of prosocial peers in school. During the first year, a prosocial skills program was devised, based on other programs (Cartledge & Milburn, 1980; Michelson et al., 1983; Schneider & Byrne, 1987). Nine sessions were given on themes such as "How to make contact," "How to help," "How to ask (<why>)," and "How to invite someone in a group." Coaching, peer modeling, role playing, and reinforcement contingencies were used during these sessions. The program was aimed at self-control during the second year. Using material from previous studies (Camp, Bloom, Hebert, & Van Doorminck, 1977;

Goldstein, Sprafkin, Gershaw, & Klein, 1980; Kettlewell & Kausch, 1983; Meichenbaum, 1977), 10 sessions were developed on themes such as “Look and listen,” “Following rules,” “What to do when I am angry,” “What to do when they do not want me to play with them,” and “How to react to teasing.” Coaching, peer modeling, self-instructions, behavioral rehearsal, and reinforcement contingencies were also used during these sessions.

From the 1,037 boys assessed in kindergarten, those above the 70th percentile on the kindergarten teacher-rated disruptive behavior scale were randomly allocated to a treatment or control group. At the end of the 2-year intervention and up to the second year after the intervention, no significant differences were observed between the treated and the control groups. Because of these disappointing results, it is likely that the follow-up of the preventive experiment would not have continued had it not been part of a longitudinal study. Most preventive delinquency interventions have follow-up periods of less than 1 year (Tremblay & Craig, 1995; Tremblay, LeMarquand, & Vitaro, 1999).

Three years after the end of the intervention, when most of the boys were in their last year of elementary school, the annual assessments revealed statistically significant positive effects. The boys from the treatment group reported less delinquent behavior, they were rated by their teachers and their peers as being less disruptive, more of them were still in an age-appropriate classroom, and they tended to have less disruptive friends than the control group boys (McCord, Tremblay, Vitaro, & Desmarais-Gervais, 1994; Tremblay et al., 1991, 1992; Vitaro & Tremblay, 1994).

Assessments of the boys up to 17 years of age revealed that the intervention had long-term beneficial influences on the boys’ development, but these depended on age, domain, and data source. With respect to global school adjustment, measured by being in an age-appropriate regular classroom, the intervention appeared to have a positive impact before the transition to high school and in the latter part of high school (Tremblay, Vitaro, Nagin, Pagani, & Séguin, 2003). The boys who remained in an age-appropriate regular classroom during elementary school were in a very different social and intellectual environment compared to those who were held back or placed in special classes or schools. The quality of that environment may have had beneficial effects upon other aspects of their development (e.g., self-esteem, attitudes toward school, antisocial behavior). This was confirmed by the school dropout data observed when the boys were 17 years of age: the school dropout rate for the control group was twice as high (21.6%) as the one for the treated group (10.5%) (Vitaro, Brendgen, & Tremblay, 1999).

Antisocial behavior was assessed both with self-reports and court records. The latter did not reveal any significant differences between the groups. One would have hoped that an intensive early intervention with disruptive boys would have reduced the number of boys who were officially treated by the courts as juvenile offenders. Clearly, such a procedure is costly both in terms of social resources and human suffering for the boys and their families. Thus, from the perspective of official delinquency, this type of intervention with these at-risk boys does not appear to have achieved its aim. However, from the perspective of self-reported antisocial behavior, the intervention reduced the number of antisocial behaviors from ages 13 to 17 (Lacourse et al., 2002; Vitaro, Brendgen, & Tremblay, 2001). Path analysis showed that reduction in disruptiveness and increase in parental supervision by age 11, as well as association with nondeviant peers by age 12, were part of a chain of events that was found to mediate the effect of the program on the initial level of antisocial behavior at 13 years. The analysis also showed that the program had an indirect effect through these variables on the growth of delinquency from 13 to 16 years of age.

With developmental trajectory analyses we showed that disruptive kindergarten boys who did not participate in the preventive intervention were at higher risk of following a high-level antisocial trajectory, and less likely to be on a low-level antisocial trajectory (Lacourse et al., 2002). We also tested whether the 2-year (between 7 and 9 years of age) preventive intervention targeting the disruptive kindergarten boys and their families would deflect them to a low-level antisocial behavior trajectory during adolescence. Results did confirm this hypothesis especially for physical aggression. Boys from the intervention group, compared to those from the control group, were more likely to follow the lowest-level trajectory and less likely to follow high-level trajectories. We also did not observe any differences in the probability of following specific physical aggression trajectories between the boys from the intervention group and those who were not among the most disruptive in kindergarten.

I believe this is the first demonstration of an intervention with disruptive elementary school children showing such a significant impact on the developmental course of physical aggression during adolescence. In fact, I have seen no evidence in the literature of any intervention with a long-term follow-up that showed a significant reduction in levels of physical aggression. These results are impressive because the intervention could have had a significant impact by simply deflecting some of the high-risk boys from a medium-level trajectory to a low trajectory. However, the results show that the disruptive boys who participated

in the intervention were deflected from high-level trajectories to lower-level trajectories. Interestingly, we did not observe a significant impact of the intervention on the developmental trajectories of theft. Thus, the parent training and social skills training which was attempting to reduce disruptive behaviors such as physical aggression, opposition, and hyperactivity did not change an antisocial behavior which is considered “covert” rather than “overt” (Loeber & Schmaling, 1985). Taking away things from others is a behavior that starts as early as physically aggressing others (Tremblay, Japel, et al., 1999; Tremblay, 2004). In early childhood behavior is rarely covert, but as children become more cognitively sophisticated and learn to delay gratification, they will try to get others’ possessions without confronting them directly. The best evidence of this transformation of open antisocial behavior to covert antisocial behavior is the development of indirect aggression (i.e., covert manipulative behaviors, such as spreading rumors, getting others to dislike a person, becoming friends with another person as a form of revenge, etc . . .). As the frequency of physical aggression decreases with age, the frequency of indirect aggression increases (Tremblay et al., 1996; Vaillancourt, in press). Thus the socialization process does have some impact, but the resilience of the jungle fabric is such that more sophisticated ways are developed to achieve the old “primitive” goals.

CONCLUSION

I have argued in this chapter that the “resilience” concept, which is possibly at the peak of its fashion, could not be applied to the development of disruptive behaviors unless we accept that it means the reverse of the meaning usually given to “resilience” by psychologists and psychiatrists, and sometimes by physical health specialists. This is because disruptive behavior is not an illness one catches and then attempts to get rid of in order to return to the initial state of health. Disruptive behaviors are rather something you are born with, an initial state, and you have to work hard at getting rid of them. In fact these behaviors are so “resilient” that you never get rid of them, you simply keep them in check by constant self-regulation. If the word “resilient” is used to mean “to recover an original form or state, after having been submitted to forces that could make you lose that original state,” then saying that a child who has learned not to physically aggress others is “resilient” does not make sense. The whole exercise of education and growing up is to get rid of your original state. Children who do not learn *not* to cry and scream when they are angry are resilient, children who

do not learn to talk are resilient, children who remain illiterate after having been taught to read and write are resilient.

From this perspective, prevention of disruptive behavior problems should not be seen as an effort to prevent innocent young children from learning from parents, siblings, peers or television how to aggress against others or how to refuse to obey rules. Prevention of disruptive behavior is, in fact, what used to be called “moral education”: the process by which children learn how to behave in a way that will enable them to be accepted and even appreciated by their social environment. Since children are not born socialized, it is not a state they risk losing, it is a state they need to acquire, and the later they receive the proper support (education), the less likely they are to master these very sophisticated and terribly important skills for a citizen.

“I can say in my own favour that I was as a boy humane, but I owed this entirely to the instruction and example of my sisters. I doubt indeed whether humanity is a natural or innate quality.” (Charles Darwin, 1876/1983, p. 11)

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