

Aggressive Behaviour

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<http://www.acscd.ca/acscd/public/papers.nsf/aaf6c8775838295785256636005824c9/37c16859303dc61d85256d730007d4d8!OpenDocument>

Abstract

In this paper, Richard Tremblay addresses four main questions: What is aggressive behaviour? When does it start? How does it develop? and Can we prevent the development of chronic aggression? Meta-analyses of international studies indicate that (1) the majority of children use physical aggression less and less frequently as they grow older, (2) there are no statistically significant groups of children who start to show stable high levels of physical aggression after entry into kindergarten, and (3) children are at their peak in frequency of physical aggression in kindergarten. He argues that we need intensive interdisciplinary investigations to sort out the complex interactions between genes, brain, and environment that lead to the early regulation of physical aggression, but that first we need studies that describe the development of different forms of aggressive behaviour during early childhood.

Controversies Addressed

Perhaps not surprisingly, the literature on aggression is filled with controversy and conflict. The definition of aggression is in itself problematic. Does aggression include moodiness, irritating behaviour and/or health risks like drug use? Should our measures of aggression include a “moral” component, an assessment of the aggressor’s intentionality, or of the damage caused, or be based only the actual behaviour which we deem aggressive?

Another area of longstanding controversy is rooted in conflicting perspectives on human nature, the nature/nurture debate applied to aggression. Attempts to explain the development of aggression are often based on underlying implicit beliefs about human nature, varying from a belief in “original sin” (i.e., we need to be socialized out of our natural tendency to aggression) to a belief that all violent behaviour is learned.

A link has been drawn between aggression and low socioeconomic status, with a frequent interpretation of the findings that poverty causes violent behaviour. Tremblay argues, however, that “Failure to teach children to regulate violent behaviours during the early years leads to poverty much more clearly than poverty leads to violence.”

What is aggressive behaviour?

Tremblay states that the definition of aggression is historically and currently the biggest problem in this area of research. As evidence for this argument, he describes various measurement scales used to assess children's and adolescents' aggressive behaviour, instruments which contain a mix of behaviours ranging from attention-seeking to physical aggression, with one widely-used rating system including such items as "argues, brags, disobeys, poor peer relations, lies, moody, sulks, loud." He asks if it makes sense to classify annoying children in the same category as those who attack others.

Another definitional problem is identifying the different forms of expression of aggression, and differentiating them from other phenomena which are associated but different, such as hyperactivity and opposition.

Tremblay asks if aggressive behaviour is always antisocial, and if our research aim in this area is to prevent the development of all aggression. He points out that the ability to be aggressive when needed is usually considered an asset in many endeavours, including tennis, sales, and political leadership, which again raises the question of definition.

A further definitional issue is illustrated by comparing aggression studies with nonhuman animals with those conducted on humans. Definitions of animal aggression are almost always based on the animal's actual behaviour, rather than on the animal's intention or on the effect of its behaviour on the "victim." Definitions used in human aggression studies, however, are most frequently "moral" judgements, where an observer decides that the observed behaviour was or was not intended to be harmful to another. The intent criterion is especially problematic when studying the development of aggressive behaviour during early childhood. How can one make a decision about the age that a child might reasonably be seen as having a conscious intention of injuring another?

The intent criterion is not only a problem for studies of infants and non-human animals. Current brain research is illustrating how anger and fear can lead to defensively aggressive reactions in older adults that are clearly not under the control of individual will.

Although it was noted over 25 years ago that definitional problems were impeding the progress of research on aggression, these problems have not been effectively addressed or rectified in the field. Tremblay notes that "Investigators not only aggregate largely different forms of behaviours which have traditionally been considered 'aggressive,' but they also tend to aggregate aggressive behaviours with socially disruptive behaviours such as opposition and hyperactivity, with illegal activities such as smoking marijuana, and with health related risky behaviours such as not using a condom."

When do humans start to aggress?

Tremblay reviews many approaches to thinking about this question, which is often framed as the “age of onset” of aggression. The apparently rapid increase in deviant behaviour during adolescence, which is followed by an equivalently rapid decrease and labeled the “age-crime curve,” has been attributed variously to rising testosterone levels, and to bad environmental influences such as deviant families, deviant peers, and the media.

There are different beliefs and assumptions that influence our explanations of the dynamics that underlie aggression. The social learning approach to the development of aggressive behaviour is that children learn to be aggressive, that they are taught their behaviour by exposure to adult and peer models and the media. This emerged as a reaction against a popular mid 20th century idea that man had inherited an instinct for aggression that he needed to learn to control in order to prevent self-destruction, which itself has its roots in the much older idea of original sin.

This debate has important consequences for political scientists, philosophers, and lawmakers, as well as for child development investigators and educators. Whether humans are born with a tendency to aggression that needs curbing, or whether they learn to be aggressive through social learning, makes a difference in our response to it, including our prevention efforts. Tremblay observes that the underlying debate is really about our view of human nature.

Results of age of onset studies vary considerably. Studies that depend on parents’ recall of physical aggression yield findings of later onset than assessments that are made closer to the time of occurrence. While reports on the frequency of physical aggression show a decrease from age 4 to 11, indirect aggression increases from age 4 to 8. Tremblay suggests that the exciting work that needs to be done is to study intra-individual developmental trajectories of aggressive behaviours during infancy and toddlerhood, and their relationship with later development.

A determination of the age onset of physical aggression as happening sometime during infancy is often not accepted as valid because of its not meeting the criteria of intentionality and/or harm to the victim. Tremblay points out that perhaps it is not the infant’s will that is harmless, but the weakness of the infant’s limbs, and concludes that we cannot identify the origins of aggressive behaviour by focussing on the consequences of the acts. The focus on the severity of the consequences of aggressive behaviours is a legitimate area of study, but different from the study of the origins of aggressive behaviour, and should lead to different measuring instruments.

How stable is aggressive behaviour?

Although there are studies reporting aggression to be as stable as intelligence, these findings are highly misleading. Because global assessments of individuals’

relative positions on scales of aggressive behaviour at two points in time are highly correlated does not mean that assessment of a given form of aggressive behaviour at time one (e.g., disobedience in class) will accurately predict another form of aggressive behaviour at another point in time (e.g., arrests for physical violence). Tremblay points out that this is one of the reasons why the use of global scales that incorporate aggression, antisocial behaviour, and also delinquency, have thwarted real understandings of these different phenomena and their interrelationships.

Meta-analyses of international studies indicate that (1) the majority of children use physical aggression less and less frequently as they grow older, (2) there are no statistically significant groups of children who start to show stable high levels of physical aggression after entry into kindergarten, and (3) children are at their peak in frequency of physical aggression in kindergarten. These observations indicate the need to study the preschool years to understand the early development of physical aggression.

We do not yet have analyses that explain the mechanisms involved in the ups and downs of physical aggression followed by an increase of verbal and indirect aggression. Tremblay suggests that there are probably many factors at play, including neurological maturation, parental behaviour, and interactions with siblings and peers. The age-brain development curves for higher cognitive functions and for receptive language and speech production parallel the age-physical aggression curve. Numerous studies show a link between poor language performance and antisocial behaviour. Mothers' coercive behaviour at five months of age and presence of a sibling are among the best predictors of high levels of physical aggression between 17 and 42 months of age.

Tremblay argues that we need intensive interdisciplinary investigations to sort out the complex interactions between genes, brain, and environment that lead to the early regulation of physical aggression, but that first we need studies that describe the development of different forms of aggressive behaviour during early childhood. By understanding different developmental aggression trajectories, we can plan interventions that help people follow trajectories that lead to the prosocial use of their proneness to aggressive behaviour. Studies that target aggressive behaviours need to be longitudinal, with frequently repeated measurements, optimally occurring at least every 2 to 3 months during the first 3 years, and every 6 months thereafter through to adolescence.

Can we change the course of physical aggression development?

Longitudinal data cannot answer satisfactorily our questions about causation, and experimentation with children (which might give us answers about causation) is generally considered unethical. We do however routinely engage in interventions which are guided by instinct rather than by sound knowledge of child development, particularly with children and youth who tend to be disruptive. Tremblay argues that the process by which we establish the effectiveness of

interventions should be experimental, that we should look at intervention efforts as opportunities to test hypotheses concerning the causes of aggression, while searching for effective ways to help at risk individuals.

If the regulation of physical aggression is learned during the preschool years, one would expect that interventions specifically targeting this regulation would prevent chronic physical aggression, and increase the likelihood of positive aggression. By targeting different hypothesized causal mechanisms, such as emotional regulation, executive functions, information processing, impulsivity, parental discipline, and peer influence, we could test these hypotheses more directly than with longitudinal studies, and simultaneously find the best preventive interventions.

Tremblay concludes by observing that children who fail to learn alternatives to physical aggression during the preschool years are at very high risk of many problems. They tend to be hyperactive, inattentive, anxious, and fail to help when others are in need; they are rejected by their classmates, get poor grades, and disrupt school activities. They tend to be placed in groupings of similar children, which reinforces their marginal behaviour. They are among the most delinquent from pre-adolescence onward, most at risk of dropping out of school, having a serious accident, being violent offenders, and being diagnosed as having a psychiatric disorder. "Failure to teach children to regulate violent behaviours during the early years leads to poverty much more clearly than poverty leads to violence."

About the Author

Richard Tremblay, Professor of Psychiatry/Psychology and Director of the Research Unit on Children's Psychosocial Maladjustment at the University of Montreal, has conducted, for the past sixteen years, a program of longitudinal/experimental studies on the physical, cognitive, emotional and social development of children from conception onward, in order to gain a better understanding of the development and prevention of antisocial and violent behaviors. He has also tested the short term and long term effects of an intervention program aimed at preventing adjustment problems in youths. He has published with his colleagues more than 200 scientific articles, chapters, and books. He is titular Chair in child development at the University of Montreal, a member of the National Consortium on Violence Research (USA), Molson Fellow of the Canadian Institute of Advanced Research, and Fellow of the Royal Society of Canada.

About This Summary

Dr. Tremblay has provided us with a draft of his paper to be presented at the WebForum in November, 2001. Following the dialogue among the scientists at the WebForum, he will write the final version of his review of his field, and his

vision of productive directions for future research, which will be included as a chapter in the WebForum 2001 volume and curriculum resources. In his draft of the chapter, he includes relevant references to the work which informs his opinions and statements, which are included in a separate document.

This summary has been prepared by Dona Matthews, with input from others, as a source of information for those who wish to participate in the dialogue, and as a curriculum document for those participating in courses built around WebForum2001

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Human Development; gradients; learning society; Agression; Millennium Dialogue.