A Developmental Approach to the Prevention of Adolescent's Aggressive Behavior and the Promotion of Resilience

Tina Malti and Gil G. Noam

This article introduces the clover model, a research-based developmental model of resilience and psychopathology related to the prevention of aggressive behavior and the promotion of resiliency in adolescents. It describes how social cognitions and emotions function differently at different periods of adolescent development and influence problem behavior, such as aggression and antisocial conduct, as well as resiliency. A prototypical prevention program based on the model is discussed. Finally, we describe an organized after-school activity, also based on the model, as a concrete example of this developmentally differentiated intervention approach.

Keywords: developmental prevention, aggressive behavior, resilience, adolescence

Aggressive and antisocial problem behavior is widespread among children and adolescents. Epidemiological studies indicate that the prevalence rates for externalizing behavior in youth, such as aggression and delinquency, range from 10 to 20%, depending on age, gender, type of behavior problem, and social factors (e.g., European Health Report, 2005). With the increasing loss of social structure and stressed environments, these risks in the youth population have been increasing worldwide from high base rates of externalizing behavior. Researchers and policy makers have acknowledged the tremendous long-term problems caused by persistent aggressive problem behavior, and during the last 25 years substantial efforts have been made to develop school and after-school prevention programs. Despite many success stories, an integrated approach to youth development and resiliency, as well as to the prevention of aggression in school and after-school contexts, is still rare (Malti & Noam, 2008).

Developmental scientists emphasize the importance of understanding adolescents' aggressive behavior from a developmental, strengths-oriented perspective (Noam & Malti, 2008; Scheithauer, Mehren, & Petermann, 2003). By definition, adolescent aggressive behavior fluctuates over time. One of the biggest challenges facing practitioners is to distinguish between normal developmental changes and the atypical emergence of aggressive behavioral disorders. Adolescents' social-cognitive and socioemotional development helps determine whether early signs of a problem will evolve into a clinically relevant disorder or resolve into healthy development. Despite this emphasis, integrative concepts that systematically link developmental theory with aggression prevention practices directed at young people are still rare. The objective of this article is to fill part of this research gap by outlining a developmental model for the prevention of aggression and the promotion of resiliency in adolescents.

A Developmental Model of Resiliency and Psychopathology

A developmental perspective places symptoms and strengths within the context of a young person's development and thus helps us understand what they mean (Noam, 1996). From this perspective, it is thus critical to conceptualize the emergence of aggression as a developmental disorder emerging from adolescents' developmental histories, including their life experiences and the evolution of meaning structures embedded in their social contexts and inherited predispositions (Noam, 1988). The development of aggressive behavior is also associated with particular social cognitions and emotions that individuals assemble to construct their social world at a given level of development.

The revised social information processing (SIP) model proposed by Dodge and colleagues (Lemerise & Arsenio, 2000; Crick & Dodge, 1994) describes the links between children's typical (and biased) social cognitions, emotional processing, and aggressive behavior. Aggression is associated with biased social cognitions at each step of the social information process. An example is the incorrect perception of ambiguous cues as hostile (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002). Research also indicates that aggressive behavior is associated with problems in the regulation of emotions and emotional understanding. For example, a recent study by Arsenio, Adams, and Gold (in press) shows that adolescents demonstrating proactive aggressive behavior display biased processing of emotions in moral dilemmas, such as focusing on the positive emotional consequences of aggression. Despite the great explanatory power of the SIP model for aggression, many questions remain unanswered. For example, it is unclear if the relations between aggression and social-cognitive biases emerge at different levels of development, or if they apply throughout childhood and adolescence.

We have argued elsewhere that a developmental perspective is important, because it helps us understand and reinterpret the social cognitions, emotions, and motivation that young people apply in constructing their reality at any given time (Noam & Malti, 2008). It is even more essential to understand the development of young people from a prevention perspective, because it helps us understand the phenomenology associated with aggressive behavior. This perspective also helps the practitioner communicate with young people in ways that match their understanding of the social world, thereby allowing the practitioner to support their growth.

In our research and theory on developmental psychopathology, we have distinguished between the developmental levels of self-complexity (Noam, 1996, 1999), social cognition, and emotions. These levels are systematically linked to resiliency and the risk of psychopathology. These developmental patterns of self-complexity, social cognitions, and emotions have been summarized in a developmental model that we call the *clover model* (Table 1). The model assumes that development from middle childhood to middle adolescence can be described as the leaves of a clover, each reflecting a particular kind of development, such as social-cognitive or socio-emotional development (Noam & Malti, 2008; cf. Loevinger, 1976). We have labeled the four leaves of the clover as action, assertion, belonging, and reflection.

They typically follow each other in chronological order, although the model assumes that people move along a continuum from one leaf to another. The leaves are not conceptualized as qualitatively distinct entities; rather, they represent developmental processes flowing into one another. Every individual exercises aspects of each of these developmental processes and needs to balance them. For example, too much impulsiveness without giving enough thought to the perspective of others can cause problems. Nevertheless, at any given time during development, an adolescent may need one or more of the leaves—each has its own strengths and risks.

Table 1. A Developmental Model of Resilience and Psychopathology: The Clover Model.

Clover	Social-cognitive and Socio-emotional Development	Resilience	Risks
Action	Thinking in impulsive terms, behavior is defined in terms of consequences, self-focused emotions	Active, spontaneous, curious	*Problems with behavior control*: Impulsivity and attention problems, hyperactivity
Assertion	Proper behavior is defined by what is best for the self, low empathy and trust, thinks and feels in self-centered terms	Leadership-qualities, power-oriented, boundaried	*Externalizing problems*: Aggressive behavior; violence as revenge
Belonging	Ability to take others' perspectives; seeking the approval of others; high empathy and orientation towards others	High interpersonal sensibility, prosocial orientation	*Internalizing problems*: Feelings of depression and hopelessness
Reflection	Ability to coordinate cognitive and emotional perspectives of self and other; needing others to define who the self is	High sense of responsibility, reflective	*Internalizing problems*: Feelings of loneliness and isolation

It follows naturally from this perspective that social-cognitive and socioemotional development are inevitably linked to specific strengths and resiliencies. For example, the assertion leaf incorporates the asset of being able to assert oneself. There are also different windows of risks and psychopathology in each developmental leaf (Cicchetti, Rappaport, Sandler, & Weissberg, 2000; Masten, 2007; Noam, Chandler, & LaLonde, 1995; Selman, 1980). For example, the assertion leaf includes the risk of externalizing problems.

In the clover model, development does not necessarily entail increasing adaptation. Rather, by moving away from egocentrism, one can also move toward increasing self-doubt and self-criticism, and correspondingly, greater disorganization and risk (Noam, 1996). Thus, it is necessary to distinguish between complexity and maturity (Noam, 1992). Mature people can be more productive, but they also can be more alienated from themselves if they lack the flexibility to adapt to revised social-cognitive schemata and new emotional experiences. Thus, the clover model not only distinguishes the pathways for growth and uses them to advance mental health, but its application can also reduce problem behavior and the risks inherent in the developmental process.

Currently, we are developing an assessment tool that captures the dimensions conceptualized in the clover model (i.e., social-cognitive and socio-emotional development, resiliency, risks, and psychopathology). Although the current tools assess development to some extent, it remains a challenge in preventive practices to identify screening criteria for the risk status of adolescents or the systematic application of optimal indicators for development and strengths (Lochman, 2006). Our approach aims to capture the different meaning-making systems that reflect the developmental changes in young persons. This approach differs from traditional approaches, as it systematically links the developmental structures of adolescents to their inherent ability to move forward and help themselves to overcome risks. The ability to observe developmental capacities in multiple settings is therefore essential for planning interventions.

In the following section we describe the assertion leaf in more detail, because it illustrates the development of those adolescents who are most prone to aggressive behavior problems.

The Assertion Leaf

How can we describe the development of young people who have been identified as needing voiceand choice, important aspects of assertion (see Table 1)? Cognitively, they are able to distinguish their own self-interest from the intentions of others. Conflicting interests of the self and others are usually resolved through instrumental exchanges. These adolescents can concentrate on tasks and regulate their emotions to a certain extent, but they frequently do not show high levels of other-oriented, moral emotions such as guilt feelings. Rather, they tend to express self-focused emotions and think in egocentric terms. They may use their social-cognitive skills to control others and assert themselves. Taken to an extreme, this behavior can be related to the manipulation of others. Research indicates that aggressive children sometimes even manifest superior social-cognitive skills, but they do not show concern for fairness nor are they motivated to use their understanding in a socially appropriate manner (Gasser & Keller, in press). Studies also support the negative relation between social-cognitive development in the moral domain and empathy with aggression. For example, a recent meta-analysis shows that juvenile delinquents have less differentiated moral judgment skills than do youth without psychopathology (Stams et al., 2006; Chandler & Moran, 1990). Likewise, aggression in adolescence is related to the expression of low guilt feelings (Krettenauer & Eichler, 2006). Finally, research also shows that self-development is negatively correlated with externalizing symptoms in adolescence (see Noam et al., 2006, for a review), but positively with other-focused emotions (Hauser & Safyer, 1994).

Interestingly, there are very few studies on the resiliency of adolescents who need a voice. As in psychotherapy, aggressive behavior seems frequently to lead to a focus on problem behavior generally and the dysfunctional cognitions and emotions associated with it. However, the clover model assumes that adolescents who are at risk for aggres-

sion typically have specific strengths, for example the ability to assert themselves and develop a power-orientation, traits that are needed for leadership (Perren & Alsaker, 2006). This developmental structure suggests that opportunities to lead and participate may be particularly helpful for intervention. In fact, after-school groups of aggressive youth that focus on participation and discursive exchanges have shown positive effects (Chalmers & Townsend, 1990; Chandler, 1973).

RALLY: Developmental Prevention of Aggression and Promotion of Resilience in Youth

RALLY (Responsive Advocacy for Life and Learning in Youth) is a school- and after-school-based approach addressing youth development, mental health, and academic success. It is grounded in a significant body of evidence that mental health and resiliency are intimately tied to the developmental capacity of youth. Emphasizing a risk and resilience framework, it has built in the past several years a preventive framework and early intervention practice for middle school students. This preventive practice is informed by the clover model (Malti & Noam, 2008). We have started to systematically develop various interventions for students who are at different points in development, as indicated by the model.

RALLY is designed to support adolescents in developing their capacity to establish the healthy relationships necessary to strengthen resiliency, i.e., the ability to overcome and thrive amidst an array of challenges. Thus, the prevention not only focuses on typical adolescent risk factors, such as aggressive and externalizing behavior, but it also places mental health treatment in the context of the adolescent's development, with an emphasis on helping the young person build resiliency by providing supportive relationships (Noam, 1997; Erikson, 1963).

Resiliency has been defined as the ability of an individual to develop and succeed despite adversity. From our perspective, this ability continuously develops. Adolescents are active meaning-makers who construct and invent their world (Piaget, 1977). They can therefore overcome previous trauma through their ability to give new meaning to old events, to self-reflect, and to explore alternate thoughts and actions. Studies on prevention programs that focus on strengthening resiliency have shown good results (Benson & Scales, 2009). Furthermore, young people with stronger assets have better outcomes, that is, less violence and anti-social behavior (Benson & Scales, 2009).

Our own research and that of others indicate that many adolescents with seemingly insurmountable problems overcome these problems in the course of growing up (e.g., Fischer et al., 1997). Researchers have argued that enhancing resiliency in a developmentally differentiated way is a powerful strategy for ameliorating psychological problems (Masten, 2007; Noam, 1992). Vice versa, mismatches between an adolescent's resiliencies and developmental capacities (or a practitioner's perception of these capacities) can be damaging to the relationship with the client and the intervention (Noam, 1997; Noam & Hermann, 2002). The key for prevention programs, then, is to create an environment

and to encourage skills that augment this natural process of development and resiliency. RALLY adopts the premise that the human ability to change and recover is a developmental capacity and can be supported by a developmentally differentiated approach that helps the adolescent move to the proximal development stage (Vygotski, 1978).

Different preventive practices work best for different leaves; thus, it is critical to tailor prevention and intervention strategies to each young person's developmental level. Manifestations of resiliency provide key information about the individual's strengths and the social support systems. It is important to include these aspects in prevention services, because they are inherently linked to both social-cognitive development and psychopathology (Masten, 2007).

The assertion leaf of the clover, along with the corresponding developmental research on the social-cognitive and socio-emotional antecedents of aggression in youth, both indicate that young people's social cognitions and emotions are important for the understanding of aggression. Collectively, this developmental research suggests that young people who display aggressive behavior have difficulty taking the cognitive and emotional perspectives of others. Thus, they need role-taking opportunities, which allow them to practice taking on the cognitive and emotional perspectives of others and help them balance self- and other-focused emotions (Izard et al., 2002). Several other treatment modalities have successfully focused on enhancing the social-cognitive and moral skills of adolescents who display aggressive behavior (e.g., Gibbs, Potter, & Goldstein, 1995). However, few approaches have systematically integrated social cognitions and emotions in practices aimed at preventing aggressive behavior. However, social cognitions and emotions need to be considered jointly when investigating the antecedents of immoral action tendencies such as aggression (Arsenio & Lemerise, 2004; Latzko & Malti, in press), because research indicates that emotions are inherently linked to social-cognitive development and conjointly predict pro- and antisocial behaviors (Malti, Gummerum, Keller, & Buchmann, 2009).

As adolescents who need a voice frequently have leadership potential, it seems that opportunities to participate and lead in mentoring relationships that reduce the power struggles so typical of this group are an ideal developmental roadmap for promoting growth and reducing aggression. RALLY adopts this premise in its treatment of risks for aggressive behavior by utilizing a variety of settings (i.e., school-level interventions, after-school groups, class-based interventions, individual psychotherapeutic treatment).

In the following section, we describe our RALLY after-school program for adolescents who need a voice.

Picture It!—An After-school Activity for Youth Who Need to Develop a Prosocial Voice

Using our holistic assessment procedure and information on the adolescent's interests, we have developed an after-school group to include adolescents whom we identify as needing a voice and who may be at increased risk for, or already engage in, problematic

aggressive behavior. We decided to include these adolescents in an after-school group because meta-analyses indicate that interventions involving students at risk for aggressive behavior show good effects (Beelman & Raabe, 2009; Wilson & Lipsey, 2007).

Research also indicates that aggressive behavior is less likely if young people have leadership opportunities in formal groups (Benson & Scales, 2009). Thus, participation in after-school youth groups such as ours can potentially exploit one of the strengths of adolescents who need a voice, namely, leadership potential, to enhance growth. Organized after-school activities give young people a collaborative learning experience with their peers that help them understand the cognitions and emotions of themselves, others, and the group as a whole (e.g., Larson & Brown, 2007, p. 1085). If guided by a competent adult leader, these collaborative peer learning groups are particularly important for young people who have a strong need for a voice (Gibbs et al., 1995), as they provide opportunities for them to articulate their opinions, thereby potentially facilitating the development of mutual respect and a caring attitude.

RALLY's after-school group, which is named *Picture It!* or *Photo Justice*, is a mixture of organized artistic, community-oriented activities. We have chosen this approach because research indicates that organized artistic activities are frequently a vehicle for emotional and social-cognitive development (Larson & Brown, 2007). Likewise, activities that connect young people to the community have been shown to promote leadership and the acceptance of prosocial norms (Hansen et al., 2003; Larsen, Hansen, & Moneta, 2006).

Picture It! consists of a photography workshop featuring a curriculum on social justice. The group, which consists of two adult leaders and 10–20 participants, meets at the end of each school day for several months during the school year. The main goals of the group are to promote perspective-taking ability, reduce biased social cognitions, and promote empathy and trust in others. These are the developmental capacities in the "zone of proximal development," that is, the ones that are likely to increase empathy, leadership skills, and the ability to take the perspective of others, while at the same time decreasing aggressive behavior. The students work together to prepare a photography exhibit, which enhances goal-oriented and cooperative behavior.

But how does *Picture It!* reach its goals? The students are asked by the adult leaders to document injustices in their community by taking photographs, bringing the pictures to the group, and discussing the experiences with their peers. They discuss not only their own emotions and cognitions during the creative process of taking pictures of events they perceive as unjust, but also those of the other group members. The group also reflects on the experiences, thoughts, emotions, and actions that followed the picture taking. This process shows the students that others in the group have similar cognitions and emotions to their own, thereby creating empathy and bonds among peers. For example, the students create a collage of their pictures as a way to express their experiences of social injustice. This collage can be used to discuss the power of social activism, and how the group provides them a space to talk about the issues they face in their daily lives and the actions they might take to address these issues. It is important for the group to work toward a common goal (i.e., the photo exhibit), as this

provides cognitions and emotions associated with reaching goals such as self-efficacy and pride. The discussions aim to facilitate mutual respect and caring, as the students discuss situations involving injustice, violations of rights, and abuses of power as experienced in their daily lives. Thus, photography is used as an artistic medium to change both the students' own perspectives and their perceptions of others perspectives, with the aim of finding peaceful conflict resolutions, a skill shown to help prevent aggressive behavior (Benson & Scales, 2009). The social justice curriculum includes steps for applying self-reflection about the students' own pictures and the associated experiences of (in)justice in their lives, as well as dyadic and group exchanges about these experiences, culminating in the collaborative creation of a final exhibit.

Picture It! thus provides an opportunity for adolescents to enhance their perspective taking skills and emotional development as they prepare for the exhibit, guided by the adults. The adult leaders coach students to develop respect and a caring attitude. At the same time they provide opportunities for developing positive relationships with others, which has been shown to be an effective and efficient way to prevent adolescent aggression (Nation et al., 2003) while facilitating openness to the emotions and cognitions of themselves and others. The adult leaders combine participatory and discursive elements, and they support the creation of a constructive environment. They facilitate other-oriented cognitions and emotions through group discussions, role playing, and art projects (Izard, 2002; Larson & Brown, 2007). The development of this culture of youth empowerment and support, as well as openness and responsiveness to the positive and negative emotions of self and others, is thought to play a crucial role in social-cognitive and socio-emotional learning.

So far, *Picture It!* has been implemented twice as a pilot project within RALLY, and it has been evaluated qualitatively. The preliminary results indicate that the culture created by the adult leaders and the group has the potential to enhance cognitive and affective perspective taking, a balance between self- and other-focused emotions and cognitions, and leadership potential. As the next step, the quality of the implementation needs to be evaluated more broadly. Furthermore, we are currently developing a training manual that includes the curriculum and instructions for training the adult leaders. Clearly, the quality of their training is central to the group's success, particularly for dealing with the typical power struggles experienced by young people who need assertion and are at risk for aggressive behavior problems. They need competent leaders who can provide the right mixture of support, participation, and guidance.

Conclusions and Future Directions

In this article, we introduced the clover model, a developmental model of psychopathology and resiliency that underlies our developmental prevention practice aimed at reducing adolescents' aggressive behavior and enhancing resiliency. Of particular importance for the present article is the assertion leaf of the clover model, which

describes adolescents who have a need for voice and are at risk for or who already engage in aggressive behavior. These adolescents must overcome egocentric thinking, self-focused emotions, and use their ability to assert the self for prosocial ends.

An example of such a developmentally differentiated intervention practice is our RALLY prevention program, which consists of an organized after-school group. It is a mixture of an art- and community-based photography workshop employing a social justice curriculum. The group exemplifies the application of our developmental model. It promotes resiliency (i.e., leadership potential) and development (empathy and perspective-taking ability) by assuming systematic relations among development, aggressive behavior, and resiliency.

The goal of this article has been to describe a developmentally differentiated prevention practice exemplified by RALLY. Space limitations did not allow us to discuss the comorbitidites of aggression, such as impulsivity, and how these overlaps can be interpreted within our developmental model. The clover leaves are conceptualized as prototypes for developmental structures that are permeable. Each adolescent experiences aspects of each clover leaf during development. Last but not least, we described as an example of our developmental prevention model and practice the conceptual underpinnings of an after-school group.

Future evaluation studies are needed to strengthen our developmental model and its translation to developmental prevention practices. Longitudinal research investigating how aggressive behavior symptoms drive development is also needed, because the clover model assumes that aggressive behavior symptoms, if overcome, can be used to learn about the self and lead to more adaptive developmental pathways. Thus, longitudinal studies may help to clarify the developmental stability and vicissitudes of resiliency and the related risk of aggressive behavior problems during adolescence (Achenbach & Rescorla, 2006).

References

Achenbach, T.M., & Rescorla, L.A. (2006). Developmental issues in assessment, taxonomy, and diagnosis of psychopathology: Life span and multicultural perspectives. In D. Cicchetti & D.J. Cohen (Eds.), Developmental psychopathology: Theory and method (Vol. 1, 2nd ed., pp. 139-180). New York: Wiley.

Arsenio, W., Adams, E., & Gold, J. (in press). Social information processing, moral reasoning and emotion attributions: Relations with adolescents' reactive and proactive aggression. Child Development.

Arsenio, W., & Lemerise, E. (2004). Aggression and moral development: Integrating the social information processing and moral domain models. Child Development, 75, 987-1002.

Beelman, A., & Raabe, T. (2009). The effects of preventing antisocial behavior and crime in childhood and adolescence: Results and implications of research reviews and meta-analyses. European Journal of Developmental Science, 3, 260-281.

Benson, P.L., & Scales, P.C. (2009). Positive youth development and the prevention of youth aggression and violence. European Journal of Developmental Science, 3, 218-234.

Chalmers, J.B., & Townsend, M.A. (1990). The effects of training in social perspective taking on socially maladjusted girls. Child Development, 61, 178-190.

Chandler, M.J. (1973). Egocentrism and antisocial behavior: The assessment and training of social perspective-taking skills. Developmental Psychology, 9 (3), 326-333.

Chandler, M., & Moran, T. (1990). Psychopathy and moral development: A comparative study of delinquent and nondelinquent youth. Development and Psychopathology, 2, 227–246.

Cicchetti, D., Rappaport, J., Sandler, I., & Weissberg, R. P. (Eds.). (2000). The promotion of wellness in children and adolescents. Washington: CWLA Press.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. Psychological Bulletin, 115, 74-101.

Erikson, E. (1963). Childhood and society. New York: Norton.

European Health Report. (2005). Public health action for healthier children and populations. Geneva: WHO Regional Office for Europe. Retrieved August, 10, 2008, from http://www.euro.who.int/ehr2005.

Fischer, K.W., Ayoub, C., Singh, I., Noam, G.G.,, Maraganore, A., & Raya, P. (1997). Psychopathology as adaptive development along distinctive pathways. Development and Psychopathology, 9, 749-779.

Gasser, L., & Keller, M. (in press). Are the competent the morally good? Social-cognitive competencies and moral motivation of children involved in bullying. Social Development.

Gibbs, J.C., Potter, G., & Goldstein, A.P. (1995). The EQUIP program: Teaching youth to think and act responsibly through a peer-helping approach. Research Press, Champaign, IL.

Hansen, D., Larson, R., & Dworkin, J. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. Journal of Research on Adolescence, 13, 25-56.

Hauser, S. T., & Safyer, A. W. (1994). Ego development and adolescent emotions. Journal of Research on Adolescence, 4, 487-502.

Izard, C.E. (2002). Translating emotion theory and research into preventative interventions. Psychological Bulletin, 128, 796-824.

Krettenauer, T., & Eichler, D. (2006). Adolescents' self-attributed moral emotions following a moral transgression: Relations with delinquency, confidence in moral judgment, and age. British Journal of Developmental Psychology, 24, 489–506.

Larson, R.W., & Brown, J.R. (2007). Emotional development in adolescence: What can be learned from a high school theater program? Child Development, 78 (4), 1083-1099.

Larson, R. W., Hansen, D., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. Developmental Psychology, 42, 849 – 863.

Latzko, B., & Malti, T. (Eds.) (in press). Children's moral emotions and moral cognitions. Developmental and educational perspectives. New Directions for Child and Adolescent Development.

Lemerise, E., & Arsenio, W. (2000). An integrated model of emotion processes and cognition in social information processing. Child Development, 71, 107-118.

Lochman, J.E. (2006). Translation of research into interventions. International Journal of Behavioral Development, 30 (1), 31-38.

Loevinger, J. (1976). Ego development. San Francisco: Jossey-Bass.

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. Development and Psychopathology, 12, 857-885.

Malti, T., Gummerum, M., Keller, M., & Buchmann, M. (2009). Children's moral motivation, sympathy, and prosocial behavior. Child Development, 80, 442-460.

Malti, T., & Noam, G.G. (2008). Where youth development meets mental health and educa-tion: the RALLY approach. New Directions for Youth Development, No. 120.

Masten, A.S. (2007). Resilience in developing systems: Progress and promise as the fourth wave rises. Development and Psychopathology, 19, 921-930.

Nation, M., Crusto, C., Wandersman, A., Kumpfer, K. L., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention: Principles of effective prevention programs. American Psychologist, 58, 449-456.

Noam, G.G. (1988). The theory of biography and transformation: Foundation for clinical-developmental therapy. In S. Shirk (Ed.), Cognitive development and child psychotherapy. Perspectives in developmental psychology (pp. 213-317). New York: Plenum Press.

Noam, G.G. (1992). Development as the aim of clinical intervention. Development and Psy-chopathology, 4, 679-696.

Noam, G.G. (1996). High-risk youth: Transforming our understanding of human develop-ment. Human Development, 39, 1-17.

Noam, G.G. (1997). Clinical-developmental psychology: Towards developmentally differenti-ated interventions. In I. Sigel & K.A. Renninger (Eds.), Handbook of child psychology, Vol. 4, Child psychology in practice (pp. 585-632). New York: Wiley.

Noam, G.G. (1999). The psychology of belonging: Reformulating adolescent development. In L. Flaherty & H. Horowitz (Eds.), Adolescent psychiatry, Volume 24 (pp. 49-68). New Jersey: The Analytic Press.

Noam, G.G., Chandler, M. J., & Lalonde, C. E. (1995). Clinical-developmental psychology: Constructivism and social cognition in the study of psychological dysfunction. In D. Cic-chetti & D. Cohen (Eds.), Developmental psychopathology (pp. 424-466). New York: John Wiley.

Noam, G. G., & Malti, T. (2008). Responding to the crisis: RALLY's developmental and rela-tional approach. New Directions for Youth Development, 120, 31-55.

Noam, G.G., & Hermann, C. (2002). Where education and mental health meet: Developmen-tal prevention and early intervention in schools. Development and Psychopathology, 14, 861-875.

Noam, G.G., Young, C.H., & Jilnina, J. (2006). Social cognition, psychological symptoms, and mental health: The model, evidence, and contribution to ego development. In D. Cicchetti & D.J. Cohen (Eds.), Developmental psychopathology, Volume 1: Theory and method (pp. 750-794). New Jersey: John Wiley.

Noam, G.G., Paget, K., Valiant, G., Borst, S., & Bartok, J. (1994). Conduct and affective dis-orders in developmental perspective: A systematic study of adolescent psychopathology. Development and Psychopathology, 6, 519-532.

Orobio de Castro, B., Veerman, J.W., Koops, W., Bosch, J.D., & Monshouwer, H.J. (2002). Hostile attribution of intent and aggressive behavior: a meta analysis. Child Development, 73, 916-934.

Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-vic-tims, and bullies in kindergarten. The Journal of Child Psychology and Psychiatry, 47, 45-57.

Piaget, J. (1977). The development of thought: Equilibration of cognitive structures. (A. Rosin, Trans). New York: The Viking Press.

Scheithauer, H., Mehren, F., & Petermann, F. (2003). Entwicklungsorientierte Prävention von aggressiv-dissozialem Verhalten und Substanzmissbrauch (developmental prevention of aggressive-dissocial behavior and substance abuse). Kindheit und Entwicklung, 12, 84-99.

Selman, R. (1980). The growth of interpersonal understanding. New York: Academic Press.

Stams, G.J., Brugman, D., Dekovic, M., van Rosmalen, L., van der Laan, P., & Gibbs, J.C. (2006). The moral judgment of juvenile delinquents: A meta-analysis. Journal of Abnormal Child Psychology, 34, 697-713.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge: Harvard University Press.

Wilson, S. J., & Lipsey, M. W. (2007). School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. American Journal of Preventive Medicine, 33, 130-143.

Tina Malti, University of Zurich, *Gil Gabriel Noam*, McLean Hospital and Harvard University.

Correspondence concerning this article should be addressed to Tina Malti, Jacobs Center for Productive Youth Development, University of Zurich, Culmannstrasse 1, 8006 Zurich, Switzerland. Electronic mail may be sent to malti@jacobscenter.uzh.ch

Tina Malti is Senior Research Scientist at the University of Zurich. She is a trained developmental and clinical child psychologist with research interests in the development of social and moral emotions, psychopathology, and resilience in children and youth.
Gil G. Noam is Professor of Developmental Psychology and Developmental Psychopathology at Harvard University. He is the founding director of the RALLY program and has a special expertise in the development of resilience in children and youth.