

Empathy and Perspective Taking

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1 Foundations and Definitions

Empathy concerns a response of one individual to the emotional experiences of another. Currently, most scholars agree that cognitive as well as affective processes are involved in empathic responses. That is, observing someone who is experiencing an emotion may evoke a congruent emotion in the observer, and may also evoke perspective-taking processes, which individuals use to imagine others' situations. The former is mainly an affective response, referred to here with the term *empathy*, whereas the latter is a cognitive response, referred to here with the term *perspective taking*. Empathy can result in sympathy or personal distress. *Sympathy* (also labeled *empathic concern*) is defined as a vicarious emotional reaction based on the apprehension of another's internal state, and involves feelings of concern for others. *Personal distress* (also labeled *empathic distress*) is an aversive affective reaction, such as discomfort or anxiety, resulting from empathic overarousal induced by viewing another's negative emotion. Since personal distress is a self-focused reaction, it may hinder sympathy and perspective taking (Eisenberg, Shea, Carlo, & Knight, 1991). This entry uses the term *empathy* to refer to both empathy and sympathy, as these terms are used interchangeably in the literature. Empathy and perspective taking are thought to facilitate each other, and have indeed been found to be related in adolescence, concurrently as well as longitudinally. Both empathy and perspective taking are deemed to play important roles in adolescents' social and moral development, although their specific effects may be different. Further, empathy and perspective taking can be construed in terms of both a relatively stable dispositional characteristic (i.e., trait empathy) and a response as it occurs in specific situations (i.e., state empathy). In line with the notion that individual differences in trait empathy and perspective taking influence the likelihood of engaging in empathy-related processes in particular situations, a study among adolescents indeed revealed that trait empathy and perspective taking predicted state empathy and perspective taking (Van der Graaff et al., 2016).

2 Measurement

Many different measures have been used to assess aspects of empathy and perspective taking, such as questionnaires, facial expressions, or self-reports in response to empathy-evoking stimuli, and tests of empathic accuracy. Whereas the use of empathy-evoking stimuli and parent- or teacher-reported questionnaires is common in childhood studies, the majority of studies in adolescence have employed self-report questionnaires. Self-report questionnaires generally assess empathy and perspective taking as a trait, assessing the extent to which an individual typically engages in empathic and perspective-taking processes. These kinds of questionnaires in fact assess the *motivation* rather than the *capacity* to engage in these processes.

Some studies have used empathy-evoking stimuli, such as pictures or film clips portraying others experiencing certain emotions, to assess adolescents' empathy and perspective taking as a state. After exposure to the stimuli, participants are asked to report on their own feelings or thoughts. Another way to measure empathic responses to empathy-evoking stimuli is to assess facial expressions. Facial expressions can be coded with the use of visual coding techniques and with facial electromyography (fEMG). fEMG is a more sensitive and reliable method than visual coding, and it allows visually undetectable motor responses to be assessed. Positive emotions typically evoke an increase in activity of the zygomaticus major muscle (involved in smiling), and negative emotions typically evoke an increase in activity of the corrugator supercilii muscle (involved in frowning). Among adolescents, fEMG responses have been found to be significantly related to self-reported empathic responses to empathy-evoking stimuli portraying happiness and sadness (Van der Graaff et al., 2016). Although an advantage of the use of fEMG is that it is relatively unbiased by social desirability (as opposed to self-reports), a disadvantage is that the motor responses of the corrugator and zygomaticus muscles only allow researchers to distinguish between the experience of positive and negative emotions, and not between specific target emotions (e.g., sadness vs. anger).

Other psychophysiological measures that have been used as markers of empathy-related processes are heart rate reactivity and skin conductance, which share with fEMG the advantage of objectivity but have the disadvantage that their interpretation is complex. Decreases in heart rate are thought to indicate that the participant is attending to another person's emotional state and is experiencing sympathy, whereas heart rate increases are thought to indicate the experience of personal distress rather than sympathy. Yet, a certain level of distress may be necessary to be able to experience sympathy, and individuals might thus experience personal distress and sympathy at the same time to some extent, which complicates the interpretation of heart rate reactivity.

3 Development and Gender Differences

As children develop, they become increasingly aware of other people's feelings and that others' feelings and perspectives may differ from their own. This, in combination with language development and a growing understanding of the causes, consequences, and correlates of emotions, is believed to facilitate the ability to empathize with others in more complex situations and in response to a wider range of emotions throughout childhood and adolescence (Hoffman, 2000). During adolescence, the awareness of others

as persons with stable histories and identities grows, which provides adolescents with the ability to consider chronic aspects of others' lives beyond the immediate situation and thus advances their ability to understand others' emotions. In addition, increasing interactions with peers are believed to help adolescents to develop the ability to "step outside" an interaction and to simultaneously consider self and other perspectives from a third-person view, for instance when they are in a conflict (Selman, 1980). These cognitive advances are assumed to particularly foster the development of perspective taking, but, in turn, advances in perspective taking may also facilitate the development of empathy during adolescence (Hoffman, 2000).

Changes in SELF-REGULATION also play a role in the development of empathy and perspective taking. To be able to take someone else's perspective and to empathize with others, individuals need to modulate their own thoughts and their own negative vicarious emotions. Self-regulation allows one to inhibit one's own perspective in order to evaluate the perspective of another, and prevents empathic overarousal induced by the vicarious experiencing of another's emotion. Self-regulatory abilities emerge in early childhood and gradually improve over childhood and adolescence, and thus may still facilitate growth in empathy and perspective taking during adolescence. However, despite a steady increase in the ability to control one's thoughts and emotions during adolescence, it has been suggested that changes in affective processing in mid-adolescence temporarily challenge adolescents' not yet fully developed self-regulation capacities. This may result in stagnated growth or even a dip in affective empathy.

Results of the few longitudinal studies that have investigated mean level development of empathy-related processes have indeed consistently revealed increases in perspective taking over the course of adolescence. However, findings on the development of empathy are less straightforward: Increases as well as stability and even decreases have been reported. Results of a 6-year longitudinal study on the development of perspective taking and empathy between ages 13 and 18 suggested that the developmental trends are gender specific, which may partly explain the inconsistencies in previous research. This study showed that perspective taking increased across adolescence for both boys and girls, although the increase started earlier and was stronger for girls than for boys. In contrast, levels of empathy did not significantly increase across adolescence; for boys they showed a temporary decline in midadolescence, and for girls the levels of empathy were stable (Van der Graaff et al., 2014).

Although the *capacity* to take others' perspective and to empathize with others may increase during adolescence, it is important to consider that adolescents' actual *performance* in taking others' perspectives and showing empathic concern is not only influenced by cognitive advances but also by changes in *motives* and *interests*. The social and physiological changes that go together with pubertal development are believed to induce alterations in adolescents' motivation and emotions, and may also affect sociocognitive development. The increasing importance of the opinions and evaluations of peers, as well as growing interest in intimate relationships, may promote other-oriented thoughts and emotions, and may therefore foster the tendency to empathize with others. On the other hand, due to gender-specific socialization pressures, which tend to strengthen during adolescence, girls may be encouraged to show concern for others, but boys may be encouraged to inhibit these kinds of behavior. This may explain the findings of (temporary) decreases in self-reported empathy for boys in particular.

In accordance with the commonly held gender stereotype that females outperform males in showing concern for others and taking others' perspective, girls are generally found to score higher on empathy and on perspective taking than do boys. Gender differences in empathy-related processes seem to emerge during (early) childhood and remain significant in adolescence. Despite the consistent findings that adolescent girls score higher on empathy than adolescent boys, the question is to what extent these findings reflect a true difference in capacities. Results from meta-analyses show that the effect sizes of gender differences vary from small to very large, and depend on the method that is used to assess empathy. The use of self-report questionnaires reveals larger gender differences than does the use of empathy-evoking procedures or observational measures. Demand characteristics may play a role; the more respondents are aware of what is being assessed, the more they attempt to respond in line with prevailing gender stereotypes, resulting in boys reporting lower empathy than girls. This in particular holds for empathy (more than for perspective taking), which corresponds closely to the stereotype of females being caring and emotional (see *SEX, GENDER, AND EMOTION*). A multimethod study on adolescents' empathy and perspective taking indeed revealed support for this: Gender differences were larger when assessed with the use of self-report questionnaires than when assessed with the use of empathy-evoking film clips, and gender differences were mostly absent on measures of facial muscle activity (Van der Graaff et al., 2016). Another study revealed, along the same lines, significant differences between boys' and girls' self-reported empathy, but no gender-related differences in patterns of neural activity in response to viewing people in pain (Michalska, Kinzler, & Decety, 2013). Thus, although the prevailing view that females are more empathic than males is supported by ample evidence from questionnaire studies, the contrasting findings from observational studies raise questions about the origin of gender differences in empathy and suggest that gender differences in motivation for empathy are larger than gender differences in ability.

4 Neurobiological Perspective

At a very young age, witnessing another child in distress can lead to high levels of personal distress. Fortunately, due to the development of brain regions such as the temporal parietal junction (responsible for making a self–other distinction) and the ventromedial prefrontal cortex (which integrates cognition and affect to create an empathic response), children develop the ability to make a distinction between their own and other people's feelings (Shamay-Tsoory, Tomer, Berger, & Aharon-Peretz, 2003). In the first 4 or 5 years in the life of a child, the ability to understand that one's own perspective is different from the perspective of another person develops, but this development is still ongoing during adolescence.

An important process complementary to the ability to make a self–other distinction both on a cognitive and on an emotional level is executive control (Decety & Meyer, 2008). This emotion-regulation system includes the prefrontal cortex (involved in decision-making, attention, error-monitoring, and social cognition), orbitofrontal cortex (involved in reward and loss, decision making, and expectancy), amygdala (involved in the detection of threat, and emotion processing), anterior cingulate cortex (involved in emotion regulation, and error processing), anterior insula (involved in

emotional awareness), and striatum (involved in reward processing and motivation). Executive control enables us to regulate and control our emotions, which is essential to be able to attend to others' emotions and thus to engage in empathy and perspective taking. An example of such a top-down process is mentalizing—that is, the ability to correctly evaluate other people's beliefs, desires, and intentions—which has been linked to perspective taking (Crone & Dahl, 2012). Brain regions that are involved in the process of reasoning about other people's mental states—such as the inferior frontal cortex, the superior temporal sulcus, and the medial prefrontal cortex—have already developed by the end of childhood. However, a longitudinal study on mentalizing using the Reading the Mind in the Eyes task also revealed developmental changes during adolescence. That is, activity in the superior temporal sulcus showed a dip around midadolescence, and activity in the medial prefrontal cortex decreased across adolescence, which demonstrates the subtle sensitivity of this life stage for empathy-related processes (Overgaauw, Van Duijvenvoorde, Gunther Moor, & Crone, 2015).

The neurodevelopment of empathy and perspective taking is an ongoing process from childhood to adulthood, and encompasses a gradual development of brain regions. During adolescence, the brain undergoes major changes (such as gray and white matter volume changes, which are crucial to making brain mechanisms more efficient) related to hormonal changes and environmental changes. This translates into the maturation of subcortical brain areas—the oldest brain system from an evolutionary perspective, responsible for emotion, motivation, and reward—around midadolescence. Additionally, cortical brain areas, which are involved in higher information processing, self-control, and inhibition, continue to develop until around the age of 25. During midadolescence, there is a large discrepancy between the maturation of the subcortical and the cortical mechanisms, making this a sensitive period for social development, including in relation to empathy and perspective taking. Whereas social situations become more complex during adolescence and require adequate action monitoring and emotion regulation, the neural system involved in both social–emotional (subcortical; involved in empathy) and social–cognitive (cortical; involved in perspective taking) functioning is not yet fully equipped to function at an adult level. Specifically, the cortical brain regions that are involved in regulatory processes are in development, making it difficult for adolescents to think about the long-term consequences of their actions (Crone & Dahl, 2012). Thus, even though basic forms of empathy and perspective taking have already developed in early childhood, this process is still ongoing during adolescence.

5 Socialization

Parental socialization is seen as an important source of influence on the development of empathy in childhood, and in adolescence parents are still thought to contribute to the socialization of empathy. According to social learning theory, supportive parents who are sensitive to their children's needs and emotions show their children that they are willing to take their perspective and to sympathize with their feelings, and this way they provide their children with role models for empathic skills. Similarly, according to attachment theory, adolescents whose emotional needs are satisfied by supportive caregiving are less preoccupied with their own emotions and therefore are better

able to respond to others' emotions (Bowlby, 1982). Moreover, a warm parent–child relationship is thought to provide an optimal environment for the socialization of moral emotions and cognitions. That is, in the context of a supportive relationship, children are likely to attend to their parents and to be responsive to their parents' instructions. More specifically, if parents combine a warm and sensitive parenting style with the use of discipline techniques that direct the child's attention to the inner states of others, this will likely enhance empathic tendencies (Hoffman, 2000). Alternatively, a relationship with parents that is characterized by hostility and negative affect may contribute to difficulties in emotion regulation and to lower levels of empathy. These children are overwhelmed with their self-directed negative emotions and lack the space to attend to others' needs and distress. Recent empirical studies generally suggest a positive link between supportive parenting and adolescents' empathy. The link between negative parent–adolescent interaction and adolescents' empathy has received little attention as yet.

In addition, relationships with peers, which are more egalitarian than interactions with parents or other adults, are thought to provide the opportunity to learn to integrate self-interest and others' interest in dealing with conflicts. This should facilitate growth in perspective taking during adolescence. Further, adolescents increasingly rely on peers as sources of intimacy and support, and share and respond to each other's feelings and concerns, which provides them with a context to experience empathy (see FRIENDSHIP IN ADOLESCENCE). Several empirical studies have indeed revealed positive associations of empathy and perspective taking with aspects of friendship quality, such as closeness, connectedness, and conflict resolution. In addition, some studies have investigated youths' tendencies to show empathy and perspective taking specifically in the context of their friendships. Friendships of adolescents who tended to take each other's perspective were of higher quality than friendships of adolescents who had a lesser tendency to do so. However, perspective taking in friendships also appeared to come with emotional costs; adolescents with a high tendency to take their friend's perspective tended to take on the distress of their friend and to experience it as their own (i.e., personal distress), which was related to symptoms of depression and anxiety (R. L. Smith, 2015). Thus, there is evidence that peer relationships facilitate the development of empathy and perspective taking, although co-rumination on each other's concerns may also result in personal distress. Moreover, since evidence comes from correlational studies, questions remain regarding the direction of influence. Peers may positively affect adolescents' empathic and perspective-taking tendencies, but the reverse direction is equally probable: Youth who tend to show high empathy and perspective taking are better able to develop and maintain good-quality peer relationships than youth who show low empathy and perspective taking.

Media also contribute to adolescents' socialization, affecting behavior by priming cognitions and eliciting emotions. Media, such as television, music, and movies, can have a negative as well as a positive impact on adolescents' social–emotional functioning, depending on their content. That is, whereas exposure to media violence has been found to lead to desensitization and reduced empathy, exposure to prosocial media (i.e., media that create a positive mood or contain prosocial messages) has been found to be related to increases in empathy and helping (see Prot et al., 2015). Regarding *social media* (i.e., social networking sites, instant messaging), research on the effects on adolescents' empathy and perspective taking is still scarce. It has been suggested that online interactions displace offline interactions and that, given the reduced nonverbal

cues and larger physical distance in online interactions, social media use decreases the opportunities for adolescents to maintain and further develop empathy-related skills. Yet, there is no empirical evidence for such a negative association. In fact, the few studies that have been conducted suggest that increases in the frequency of social media use are related to increases in tendencies to show empathy and perspective taking (e.g., Vossen & Valkenburg, 2016). However, it may still be the case that either specific types of social media or excessive use of social media hinder the development of empathy and perspective taking in adolescence. Also, different children and adolescents might be differentially affected by social media use. Future research should also take parental involvement in adolescents' (social) media use into account, since previous research has shown that this may foster positive effects (see ADOLESCENCE AND SOCIAL MEDIA).

6 Social Adjustment

When interacting with others, it is important to regulate emotions or negative affect in order to adequately adapt behavior. This is particularly true for adolescents, who become more and more conscious of their social environment and start comparing themselves to others (Crone & Dahl, 2012). This increase in social awareness not only leads to increased consciousness about what others might think of them but also serves as a trigger to adapt behavior in order to reach a specific goal, such as "fitting in" in a group. Empathy and perspective taking contribute to this ability to successfully adapt behavior, which is important to avoid being excluded by peers (for example). Empathy and perspective taking crucially add to the formation and maintenance of healthy relationships because they facilitate controlling behavior, learning from previous (social) mistakes, and sharing and understanding other people's emotions.

Empathy and perspective taking may both facilitate prosocial behavior in adolescence (see PROSOCIAL BEHAVIORS IN ADOLESCENTS). Regarding empathy, feelings of sorrow for someone else are thought to provide the motivation to alleviate others' distress and, thus, to show helping or caring behavior. Regarding perspective taking, the tendency to imagine others' psychological point of view is thought to increase the awareness of others' needs and of opportunities to help others. Empirical research has indeed provided support for a positive association between empathy and prosocial behavior in adolescence, whereas results of studies on the association between perspective taking and prosocial behavior are mixed. Recently, the longitudinal links of both empathy and perspective taking with prosocial behavior have been studied across adolescence. Empathy indeed predicted adolescents' prosocial behavior. Perspective taking did not predict prosocial behavior directly, but was indirectly related to later prosocial behavior via its effect on empathy, suggesting that empathy has a more central role in adolescents' prosocial behavior than has perspective taking.

Regarding the role of empathy and perspective taking in antisocial behaviors such as aggression and delinquency, both are seen as important inhibitors according to the cognitive–affective model of empathy (Feshbach & Feshbach, 2009). First, the ability to discriminate and label the emotions of others is a precondition to taking others' needs into account. Second, the ability to examine a conflict situation from the perspective of another person should foster the use of positive problem-solving techniques instead

of destructive ones. Third, in an empathic observer, seeing the victim's pain and distress leads to sharing these negative emotions, which should motivate the observer to increase the victim's well-being by stopping the harmful behavior (Feshbach & Feshbach, 2009). In addition, the emotional dimension of empathy is particularly important as a mechanism for the control of aggression: The observation of expressions of fear or sadness induces an aversive emotional response, resulting in withdrawal and the interruption of aggressive behavior. The theoretical assumption that empathy inhibits externalizing behavior tends to be supported by empirical research, whereas the empirical literature is equivocal regarding the role of perspective taking in externalizing behavior. It has been argued that, if levels of empathy are low, heightened perspective taking may not inhibit, and may even facilitate, certain forms of aggressive behavior.

Thus, both empathy and perspective taking contribute to adolescents' social adjustment, but more research is needed to shed light on their unique and potentially interactive effects.

7 Adolescent Psychopathology

Impairments in empathy are quite common in child and adolescent psychiatric disorders. For example, empathy-related deficits have been observed in Tourette's syndrome, selective mutism, childhood schizophrenia, and eating disorders (Gillberg, 2007). Empathy problems have been well documented in children and adolescents with autism spectrum disorders and a wide range of externalizing disorders, including conduct disorder and oppositional defiant disorder. Autism and psychopathy have often been described as *disorders of empathy*, although the types of empathy dysfunction (i.e., empathy and/or perspective taking) may be different for the two disorders.

Autism spectrum disorder is a neurodevelopmental disorder, diagnosed when deficits of social communication are accompanied by restricted repetitive behaviors (American Psychiatric Association [APA], 2013; see also AUTISM SPECTRUM DISORDER). Baron-Cohen (2002) proposed that autism may be considered an extreme form of the male brain, characterized by superior systemizing skills and impaired empathizing skills. People with autism lack perspective-taking skills such as theory of mind and have difficulties in the development of mindreading (termed *mindblindness*). There is ample evidence that adolescents with autism spectrum disorder are impaired in theory of mind. However, far less research has examined empathy in adolescents with autism spectrum disorder. Results are mixed, with studies suggesting that empathy is intact, impaired, or excessively high. A. Smith (2009) proposed that social impairments in autism spectrum disorder may arise from an imbalance between perspective taking and empathy. Individuals with autism who are highly sensitive to other people's emotions may avoid attending to social stimuli in order to regulate the stress stemming from others, whose behavior they find difficult to comprehend.

In contrast, children and adolescents with oppositional defiant disorder or conduct disorder, especially those with psychopathic tendencies, may show the opposite imbalance disorder. In the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (APA, 2013), oppositional defiant disorder and conduct disorder are both categorized as "disruptive impulsive-control and conduct disorders." The essential feature of oppositional defiant disorder is a frequent and persistent pattern of angry and/or

irritable mood, argumentative and/or defiant behavior, or vindictiveness. Oppositional defiant disorder often precedes the development of conduct disorder, which is a more severe disorder and is characterized by a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms are violated. A specifier “with limited prosocial emotions” has been added to the classification of conduct disorder. The specifier applies to conduct-disordered youth who also show a callous and unemotional interpersonal style—that is, lack of empathy, lack of guilt, and shallow affect. Individuals with callous–unemotional traits (i.e., the psychopathic subtype) show antisocial behavior early in development, show more severe and stable patterns of conduct problems during adolescence, and are at risk of developing psychopathy in adulthood (Frick, Ray, Thornton, & Kahn, 2013). Research suggests that antisocial youth with CALLOUS-UNEMOTIONAL TRAITS have an understanding of the feelings of others and are able to take others’ perspective (intact theory of mind) but do not share others’ feelings of distress (Blair, 2013). This deficit has been ascribed to deficits in neural circuits involving the amygdala, or lack of attention to other people’s distress.

Few studies have directly addressed empathy and perspective taking in clinical samples of children and adolescents with autism spectrum disorders or callous–unemotional traits, but those that have quite consistently show dissociable deficits—that is, reduced perspective taking in youth with autism spectrum disorders and reduced empathy in those with callous–unemotional traits. Such findings are in agreement with the hypothesis that empathy involves dissociable but interactive emotional and cognitive components and processes. Knowledge about the nature of dysfunction in empathy and perspective taking across psychopathologies could help in the development of diagnostic tools and the improvement of psychotherapeutic treatments.

8 Future Directions

Empirical research on empathy and perspective taking has grown considerably over the past decades, and the recent growth in longitudinal studies on this topic has advanced our understanding of how empathy and perspective taking develop during adolescence. Nonetheless, there is still much to be learned about the roles of empathy and perspective taking in adolescents’ social functioning. Due to the many definitions and various methods that have been used to assess empathy and perspective taking in different research disciplines, the picture is still diffuse. Future research may benefit from combining different approaches in the study of empathy and perspective taking. For instance, assessment of both the *motivation* and the *capacity* of adolescents to show empathy and perspective taking may clarify inconsistencies in previous empirical results regarding the associations with social adjustment. Further, combining the use of questionnaire, psychophysiological, and neurobiological measures in longitudinal studies may lead to a better understanding of the gender differences in the levels and development of empathy and perspective taking. Moreover, since most scholars agree that empathy and perspective taking facilitate each other, and likely have common as well as unique effects on adolescents’ social functioning, more research is needed in which both are taken into account.

SEE ALSO: Prosocial Behaviors in Children; Sex, Gender, and Emotion

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Further Reading

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