Self-Regulation

It is clearly important to develop self-understanding and healthy self-esteem. But one of the most important skills that we develop in childhood is the ability to control aspects of the self. Without this ability we would have great difficulty accomplishing anything, regardless of how good we might feel about ourselves! Self-regulation is the ability to monitor and control our own behavior, emotions, or thoughts, altering them in accordance with the demands of the situation. It includes the abilities to inhibit first responses, to resist interference from irrelevant stimulation, and to persist on relevant tasks even when we don’t enjoy them.

For example, when our son Will was 7, he liked to play Monopoly Junior with his sisters. Will had developed reasonable self-regulation skills for his age, so he usually did not give in to the temptation to take money from his sisters’ piles when they weren’t looking (inhibiting first responses). Most of the time, he was able to ignore their incessant singing of “Jingle Bells” as he pondered whether to buy a property (resisting interference). And when he started to feel irritated by the singing, he could calm himself by focusing on the game (emotional regulation). Finally, though he might not do so on his own, Will did help clean up the game and put it away when we asked, even though he didn’t really want to (persisting on less enjoyable tasks). Can you envision what this scene would be like if Will and his sisters had few or no self-regulation skills? We prefer to not think about it!

Mature self-regulation requires several sophisticated cognitive skills. These include awareness of the demands of any given situation; consistent monitoring of our own behavior, thoughts, and strategies; consideration of how successfully we are meeting the demands of the situation; and the ability to change aspects of our current functioning as needed to fit the situation or to accomplish a goal. Aspects of self-regulation correlate with various positive outcomes for children and adolescents— including better academic performance, problem-solving skills, and reading comprehension; more satisfying interactions with peers; higher levels of intrinsic motivation, self-worth, perceived competence, self-efficacy, moral cognition, and moral conduct; fewer behavior problems; and lower levels of psychopathology (e.g., depression) (Eisenberg, Smith, Sadovsky, & Spinrad, 2004; Grolnick, Kurowski, & Gurland, 1999; Howse, Lange, Farran, & Boyles, 2003; Kochanska, Murray, & Coy, 1997; Ryan, Connell, & Grolnick, 1992).

When Do Children Develop Self-Regulation Skills?

Precursors of self-regulation appear early in life. Very young babies show no evidence of conscious self-regulation, but they do show primitive control of some aspects of their behavior and reactions. Even within the first few months of life, infants will turn away from sources of too much stimulation, such as loud music or voices. At 12 to 18 months, children show awareness of social demands in their environment. They are able to comply with simple requests from a caregiver, such as “come here” or “wave bye-bye.” They can voluntarily initiate, maintain, and stop behaviors, particularly when they are interacting with someone they know well. By age 2, children are able to show aspects of self-control even when a caregiver is not immediately with them. From 3 to 11 years, children grow steadily in their ability to inhibit first responses, with particularly rapid improvements from age 3 to 5. In one study, for example, 4-year-old children were better than 2.5-year-olds at not peeking while an experimenter wrapped a gift (Gerstadt, Hong, & Diamond, 1994; Kochanska, Murray, Jacques, Koenig, & Vandengeest, 1996; Kopp, 1982; Simpson & Riggs, 2005).

Older children and adolescents are increasingly able to self-regulate not only their behavior but also their emotions and problem-solving strategies. For example, across the elementary and middle
school years children become much more accurate in monitoring how well they understand what they read, and they gradually learn to modify their study strategies to improve their comprehension. Older children and adolescents are also much more likely to use strategies to manage negative emotions appropriately. If they are angry, they may take a walk or throw a tennis ball against a wall; if they’re sad, they may engage in a distracting activity, write in a journal, or talk with a friend (Brown, Bransford, Ferrara, & Campione, 1983; Dufresne & Kobasigawa, 1989; Thompson, 1994).

Self-regulation is not simply an internal characteristic; the child’s context matters too. For example, one recent study looked at children's compliance with mothers’ requests under four different conditions. The children in this study ranged from 14 months to 45 months (almost 4 years) of age. Researchers often use compliance as a measure of early self-regulation because it requires children to change their behavior in response to a caregiver's request. In the experiment, mothers asked children either to continue an unpleasant activity (to pick up toys) or to inhibit a desired response (refrain from playing with toys). Not surprisingly, it was easier for children to comply when they agreed with the mother’s request (for example, they happily helped pick up the toys and continued without being reminded; they said things like “no-no toys” or spontaneously turned away from the prohibited toys) than when they did not agree (for example, they only helped pick up toys when their mothers insisted; they hovered near and touched the prohibited toys). Overall, it was harder for children to continue an unpleasant activity than to inhibit a desired one. One reason may be that parents tend to focus on what young children should not do (“Don't touch the stove!”) rather than encouraging them to continue an activity (“You must put away all your toys before we have a snack”). It could also be that continuing an undesired activity requires ongoing effort and persistence, whereas a child can inhibit a response more easily—for example, by focusing on a different activity (Kochanska, Coy, & Murray, 2001, p. 1107).

So both the type of self-regulation required and whether the child agreed that the request was a good idea were important. What was more interesting, however, were the interactions of these two factors. Even children as young as 14 months showed a fairly high rate of compliance when they agreed with the request and it involved inhibiting a response (40%), and under those circumstances compliance increased to 85% by the time children were just over 3½ However, if children disagreed with the request, compliance for inhibiting a response was low at 14 months and later became even worse, dropping to only 4%.

The lesson here is that self-regulation comes both from internal sources, such as children’s developing ability to modify behavior and their opinion of a request, and from external factors, such as the type of self-regulation being requested. The fact that children can self-regulate does not necessarily mean that they will, even on easier tasks. It is helpful to encourage children to see the reasonableness of requests—to understand that the change in behavior makes sense. It’s also important to know what level of self-regulation we can reasonably expect at different ages.

What Factors Influence the Development of Self-Regulation?

There is evidence that self-regulation has roots in our biological makeup. Maturation of certain areas of the brain, especially the frontal lobes, enables children to resist interference and inhibit responses (Thompson, 2006). The frontal lobes undergo two periods of rapid growth, one during infancy and another from about 4 to 7 years—and these periods are consistent with the developmental trends in self-regulation we’ve described (Hudspeth & Pribram, 1990; Luria, 1973).

Along with brain maturation, another important factor is temperament. Temperament appears to have a significant genetic component. Researchers have linked aspects of temperament (such as behavioral inhibition, effortful control, and fearfulness) to several self-regulatory behaviors in preschool
and early school-age children (such as emotional regulation, cheating, compliance with adults' requests, and following rules) (Kochanska, Murray, & Harlan, 2000; Kochanska et al., 2001; Rothbart & Bates, 1998).

But these biological links do not mean that self-regulation is completely innate. Aspects of the child's environment have a strong influence too, interacting with temperamental tendencies (Rothbart & Bates, 2006). In fact, most psychologists believe that self-regulation, though influenced by biological factors, begins with external control by others and gradually becomes internalized. For example, children learn specific strategies for regulating behavior and emotions by **modeling**—the process of imitating, practicing, and internalizing others' behavior (Schunk & Zimmerman, 1997). And children often use private speech, or speech they direct toward themselves, to guide their problem-solving efforts and to regulate behavior, cognitive strategies, or emotions.

It also appears that the way in which adults try to direct children's behavior and emotions affects how quickly and how well self-regulatory skills develop. For example, children are more likely to change their behavior if they agree with a given request. When children comply because they agree with the request, there is a greater chance that they will view the request as being their own idea, or at least regard it as sensible, and not view it as interfering with their attempts to be independent (Kochanska et al., 2001). Compliance under these conditions may ultimately lead to more effective self-regulation. In fact, in the study we discussed earlier, compliance when the children agreed with the request was the only type that predicted compliance when the children were left on their own—which is the goal of developing self-regulation. When a child disagrees but is forced to comply anyway, there is less internalization of the parents' standards, and parents tend to resort to more power-based (rather than reason-based) control tactics.

Think for a moment about the implications of this. There will always be times when a child disagrees with parental requests, rules, or decisions. But forcing obedience through the use of power and control may delay the very thing that parents are trying to teach! Strategies that encourage internalization of social standards (e.g., explaining the rationale for a rule, involving children in establishing goals and rules, and so on) require more time and effort from caregivers but are probably more likely to produce voluntary self-regulation.


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