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Brief Report

The role of executive functions and theory of mind in children's prosocial lie-telling

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ABSTRACT

Children's prosocial lying was examined in relation to executive functioning skills and theory of mind development. Prosocial lying was observed using a disappointing gift paradigm. Of the 79 children (ages 6–12 years) who completed the disappointing gift paradigm, 47 (59.5%) told a prosocial lie to a research assistant about liking their prize. In addition, of those children who told prosocial lies, 25 (53.2%) maintained semantic leakage control during follow-up questioning, thereby demonstrating advanced lie-telling skills. When executive functioning was examined, children who told prosocial lies were found to have significantly higher performance on measures of working memory and inhibitory control. In addition, children who lied and maintained semantic leakage control also displayed more advanced theory of mind understanding. Although children's age was not a predictor of lie-telling behavior (i.e., truthful vs. lie-teller), age was a significant predictor of semantic leakage control, with older children being more likely to maintain their lies during follow-up questioning.

Introduction

Over the past two decades, researchers have examined the sophistication of children's early lies through both naturalistic observations and experimental paradigms (Lewis, 1993; Polak & Harris,

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1999; Talwar, Gordon, & Lee, 2007; Wilson, Smith, & Ross, 2003; Williams, Kirmayer, Simon, & Talwar, 2013). Primarily, these researchers have focused on antisocial lies, which are told for personal gain or to circumvent punishment (Lewis, 1993; Talwar & Lee, 2002a, 2008). Antisocial lies have been observed in children as young as 2½ years (Evans & Lee, 2013). Yet, children under 8 years of age have difficulty in maintaining these lies beyond the initial false denial (Talwar & Lee, 2002a, 2008; Talwar, Gordon, et al., 2007). As children develop, they begin to use other forms of deception; for example, they are more likely to tell prosocial lies, which are told for the benefit of another individual (Bok, 1978; DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). However, few studies to date have examined prosocial lie-telling in children despite this form of deception having implications for social and moral development (Talwar & Crossman, 2011).

Prosocial lying

Lies fall on a continuum, ranging from prosocial through socially neutral to antisocial. Antisocial lies, which have been extensively studied in both preschool- and school-aged children (Evans & Lee, 2013; Talwar & Lee, 2002a, 2008, 2011), represent self-motivated deceptions and therefore hold no gain to the lie recipients. These lies are told to protect oneself from discovery of a transgression or other self-motivations. In contrast, prosocial lies are told for the benefit of another individual. In general, a lie is evaluated based on the permissibility of the lie and the impact the lie has on the lie recipient. Lindskold and Han (1986) argued that individuals, and often societies, morally evaluate lies based on the social motivation they serve. As such, prosocial lies are commonly evaluated more favorably than those told for exploitive or antisocial purposes because prosocial lies serve a social function. Specifically, such lies are frequently used to maintain social cohesion by sparing another individual's feelings or protecting interpersonal relationships (Bok, 1978; DePaulo, Jordan, Irvine, & Laser, 1982; DePaulo & Kashy, 1998; DePaulo et al., 1996; Ennis, Vrij, & Chance, 2008). In children, telling prosocial lies not only demonstrates increasing deceptive abilities but also may reveal children's ability to navigate the complexities of social interaction and understanding of reciprocity within interpersonal communications. However, prosocial lying is also a morally conflicting behavior for children.

Prosocial lying is an example of a behavior that represents contradictory moral and social rules of communication. On the one hand, it violates a fundamental principle of communication, the *maxim of quality,* which requires speakers to be truthful and to inform, not misinform, their communicative partners (Grice, 1980). Based on this principle, listeners tend to expect speakers to be truthful and avoid falsehoods. Thus, lying is considered by many to be a serious moral transgression (Bok, 1978). On the other hand, prosocial lies tend to be accepted social conventions and are evaluated less negatively than antisocial lies (Lindskold & Han, 1986; Nyberg, 1993; Sweetser, 1987). Indeed, philosophers have argued that there exists an equally important fundamental rule of conversation, the *meta-maxim of general cooperation*(Lakoff, 1973; Sweetser, 1987), which requires speakers to be amicable and to help, not harm, their communicative partners. In politeness situations, adherence to this rule may require the individual to not communicate the blunt truth in order to maintain amicable relations and avoid hurting another person's feelings. Thus, prosocial lies are considered a form of communication that both violates and upholds the basic rules of interpersonal communication. Adults seem to resolve this conflict by endorsing *little white lies* as appropriate (Lavoie, Leduc, Crossman, & Talwar, 2015). Similarly, children rate prosocial lies less negatively than other forms of deception, indicating that they also perceive some positive aspects of telling prosocial lies (Bussey, 1999; Lavoie et al., 2015).

These perceptions are reflected in children's behavior. Talwar, Murphy, and Lee (2007) examined prosocial lie-telling in children aged 3–11 years using a modified disappointing gift paradigm (Cole, 1986; Saarni, 1984). In this paradigm, a research assistant gave a child a prize that he or she had previously rated as undesirable. Talwar, Murphy, and colleagues (2007) found that the majority of children told a prosocial lie to spare the research assistant's feelings and that older children were more likely to tell such a lie than younger children. Similarly, Popliger, Talwar, and Crossman (2011) examined children's ability to tell a prosocial lie at a personal cost. In this study, preschool children were less likely to tell prosocial lies compared with elementary school children, particularly when there was a cost to themselves (e.g., losing a prize) for telling the lie.

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