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9 Commentary: On the Structure of Lies and Deception Experiments

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There is a particular structure to every situation in which a lie is told. There must be a liar, a person being lied to, a motive for the lie, a period spent conjuring the lie, a form to the lie, as well as stakes associated with successful or unsuccessful delivery of the lie. The value assigned to each of these structural features necessarily affects the likelihood that a person will choose to lie or tell the truth. For example, it is more tempting to lie to people who are poor lie detectors than to people who are good lie detectors; it is more tempting to lie for motives that justify a lie (such as avoiding harm), than for motives that don't justify a lie (to gain a reward that we don't deserve); it is more tempting to lie in situations in which there is little risk if caught in a lie, compared with situations in which terrible punishment awaits those caught lying, and so on.

The adult deception literature has looked at both lies and the structural features of lie situations as independent variables to answer the following two questions: "What are the behavioral clues to deceit?" and "How good are people at detecting these behavioral clues to deceit?" (see DePaulo, Stone, & Lassiter, 1985; Zuckerman & Driver, 1985, for reviews). For example, lying and truth telling are manipulated in order to determine behavioral clues to deceit (e.g., Ekman, Friesen, & O'Sullivan, 1988; Frank, 1989; Kraut & Poe, 1980); or certain structural features, such as characteristics of the liar and the stakes, are manipulated to determine their effect on observers' abilities to detect deception (e.g., DePaulo, Lanier, & Davis, 1983; Frank, 1989).

The topics of lying and the structural features of lie situations have received the same treatment in the child deception literature, with one big exception. In the child literature, lying appears not only as an independent variable (e.g., Feldman, Jenkins, & Popoola, 1979; Morency & Krauss, 1982), but also as a

dependent variable (e.g., Ceci & DeSimone Leichtman, this volume; Chandler, Fritz, & Hala, 1989; Hartshorne & May, 1928; Lewis, Stanger, & Sullivan, 1989; Nigro & Snow, this volume; Tate & Warren, this volume). For example, structural features such as motives are manipulated to determine how they influence whether or not a child will lie (e.g., Ceci & DeSimone Leichtman, this volume), or features such as the characteristics of the liar and target are manipulated to ascertain their effects on whether or not a child will lie (e.g., Nigro & Snow, this volume).

These structural features are present in every deception scenario, regardless if the scenario presents itself in the real world or in the laboratory. In the laboratory, some of these structural features are experimentally manipulated and others are not; however, all of these structural features are present. When manipulated in an experiment, they have been shown to influence the probability that a child will lie (e.g., Ceci & DeSimone Leichtman, this volume; Nigro & Snow, this volume). It seems reasonable to presume that even when not manipulated, these structural features will still exert pressure on a child to lie or tell the truth.

This chapter attempts to incorporate the findings on children's lies presented in this volume into a general discussion of the structural features of both lies and the situations in which lies are produced. These structural features of a lie—such as deliberately misleading someone, and the structural features of a deception situation—such as the motive for the lie, the stakes for successful and unsuccessful deception, the relationships of the individuals involved, and so forth—are examined in order to speculate how the way in which each of these features are modeled or experimentally manipulated affects the likelihood that a person—in this case a child—will lie.

FEATURES THAT DEFINE A LIE

The definition of lying that has had the most utility for our research on adult deception was formulated by Ekman. He defined a lie as a deliberate attempt to mislead a person (target), without the target's prior consent to be misled (Ekman, 1985). This two-part definition has the most utility for our research because it distinguishes between deliberate and accidental behaviors, as well as between sanctioned and unsanctioned behaviors. It is these distinctions that have important implications for children's deception research.

A Deliberate Attempt to Mislead. The first part of Ekman's (1985) definition is the deliberate attempt to mislead on the part of the liar.[1] The liar chooses a

[1]The term *liar* is used as a shorthand term to describe the person telling the lie, even though the term *liar* has pejorative connotations. Because there are situations in which lying is justified (e.g., lying to a person who wants to murder your brother about his whereabouts), this term is intended to be connotatively neutral.

statement or course of action that the liar believes will create erroneous thoughts, actions, or beliefs in the target. Authors in this volume have discussed this concept under the term *intent;* their discussions are quite thorough and the reader is directed there for a fuller understanding of this term (e.g., chapters by Burton & Strichartz, Flanagan, and Leekam).

The deliberate attempt to mislead component of a lie is important because the word *deliberate* separates behaviors done with a purpose from behaviors done by accident. In other words, a child who deliberately misleads someone has *chosen* to mislead that person. In contrast, a child who misleads someone inadvertently or unconsciously by definition is not aware that he or she is misleading or being untruthful. If the child is unaware of the untruthfulness, then the consequences of consciously presenting untruthful information—that is, guilt, or fear of being caught in a lie, or fear of punishment for the act the lie was designed to conceal (all of which reduce the likelihood that an adult will lie, all other things being equal; Ekman, 1985)—would not be present[2] in proportions large enough to either inhibit or unmask a child's presentation of untruthful information. In this instance, the untruthful child should appear behaviorally no different from a truthful child.

This deliberate versus nondeliberate presentation of erroneous information is one of the key features that distinguish among the three types of nontruthful testimony outlined by Haugaard and Reppucci (this volume). Haugaard and Reppucci distinguish intentional presentation of erroneous information from both mistaken recall of an event and honest difference of opinion in that only in the former case does an individual intentionally present false and misleading information. In both latter cases the individual presents what he or she believes to be the truth. Notice that the law relies upon this distinction to make the presentation of false information prosecutable only when it is done deliberately (called fraud or perjury in legal proceedings). The presentation of the very same false information, but done unwittingly, is not a prosecutable offense.

Without the Prior Consent of the Target. The second aspect of Ekman's definition is that the liar does not give the target any prior notification that the liar is planning to deceive the target, so that the target cannot give his or her consent to being misled. Thus, an actor in performance is not lying to us; when we choose to view a performance we have given our tacit consent to the actors to mislead us into believing that they truly are the role they are playing (note that we even give awards to those actors who are the most effective in misleading us). However, an actor who engages us with an equally skilled performance *without*

[2]It should be noted that people do not need to lie to show guilt and fear. For example, we might feel guilty about killing someone in a car accident, even though it was not our fault. We can fear being punished for mistakenly giving inaccurate information on our tax returns, even though we did not deliberately choose to mislead the Internal Revenue Service.

our overt or tacit consent—the street corner confidence person or "con man"—*is* lying to us.

Certain social contexts can serve to give both liar and target prior notification that misleading information will be presented, and by entering these contexts, targets and liars give their consent to being misled. For example, the individuals involved in a bargaining situation do not truthfully state their final positions; this is the norm for such situations that both participants understand and expect. Likewise, many games—such as poker—require deliberately misleading someone as part of the game. As long as all the players understand that bluffing is part of the game, then the players give their tacit consent to being misled when they consent to play the game.

There are also some social contexts in which misleading others is less clearly a norm, such as certain forms of politeness. When we receive a present, we tell the gift giver that we really enjoy the present, regardless whether we actually like the gift or not. We also tell the host of a party that we enjoyed ourselves, whether we actually enjoyed ourselves or not. In these situations, we are sometimes, but not always, truthful; however, we are not expected to be always truthful—we are expected to be polite. Imagine the chaos unleashed upon our social gatherings if we were entirely truthful all the time.

We can only assume that a potential liar—whether adult or child—will be more likely to engage in misleading behaviors when the situation or the target authorize such behavior. After all, the integral part of a poker game involves misleading one's opponents. This is in contrast to deliberately presenting misleading information in a courtroom, which if discovered, is a punishable offense. It should be kept in mind, however, that just because a person or situation authorizes the liar to present misleading information does not mean that the liar will actually do so. It is just that the situation or the target permit the potential liar to present misleading information with little or no penalty if the liar so chooses.

What This Definition Does Not Assert. Ekman's definition of lying does *not* assert that lies be spoken. Leekam (this volume) uses the term *listener* to describe the person who is the object of the lie; this implies that lying must take the form of a statement or be spoken (e.g., Bok, 1978). We believe along with Bussey (this volume) and Flanagan (this volume) that deliberately pointing in a wrong direction is as much of a lie as deliberately telling someone to head in a wrong direction; thus, children who deliberately point in the wrong direction to mislead someone are lying (e.g., Chandler et al., 1989). This is why the term *target* is preferred to the term *listener*.

Included in this category of unspoken lies are situations in which a person deliberately does not answer a question, or a person deliberately chooses not to disclose information that he or she understands must be disclosed. An example of the latter situation comes from Ekman (1989), who describes the son who lies by

not telling his father that he got kicked out of school; the son is lying because he knows that his father has made it clear in previous discussions that the disclosure of this type of information is mandatory. Ekman (1985) has called these types of lies *concealment lies*. Notice that by not answering a question, or by not volunteering information, the liar is still attempting to deliberately mislead a target, and again without the target's prior consent. This is why the abused child who does not respond when questioned about the abuse is lying. This is also why a child who knows that being touched on the genitals by a stranger is wrong and must be reported to a parent is lying when he or she has been touched on the genitals by a stranger and tells no one.

Ekman's definition of a lie also does not presume that the information contained in the lie be factually incorrect, even though others have reported this to be essential to the prototypical lie (Burton & Strichartz, this volume; Coleman & Kay, 1981). Flanagan (this volume) mentions how practical jokes can fall into this category. Take the following example of a practical joke: one person (target) asks to borrow a golf ball from another person (liar). The liar gives one of his joke exploding golf balls to the unwitting target, and the target asks, "Is this a good ball?", to which the liar responds sarcastically, "No, it explodes." Because the liar knows that the target would not expect the liar to admit it was an exploding ball if in fact it was, then the liar's factually correct response misleads the target. A target's startled reaction when he or she hits the ball and it explodes will confirm that the target was in fact misled. Ekman (1985) has called this *telling the truth falsely*, and it demonstrates that one can lie with factually correct information. However, it should be noted that this is a very sophisticated form of lying even by adult standards; thus, it is unlikely that a child would be sophisticated enough to use such a strategy.

Why This Definition. This definition allows us to eliminate the other types of untruthful testimony outlined by Haugaard and Reppucci (this volume)—memory deficits or distortions, as well as testimony that involves an honest difference of opinion. If we are trying to extrapolate to serious real-life situations such as courtroom testimony of sexual and physical abuse, then it appears as if this definition captures—both by what it requires, as well as by what it doesn't require—the contingencies that the legal community would also classify as a lie worthy of penalty.

In summary, the way an investigator defines a lie may influence the likelihood that a child will lie. An experimental task that involves whether or not a child will *accidentally* mislead someone tells us nothing about *lying*. Likewise, an experimental task that requires a child to present misleading information that both the child and the target know is part of a game or expected from a social context will most likely result in an overestimation of the likelihood that this child will tell a lie in situations in which the child's honesty is expected and required by the potential target. Only those statements or behaviors that meet the requirements of

this definition of a lie[3] can begin to be generalized to questions involving the likelihood that a child will lie in situations such as the courtroom.

STRUCTURAL FEATURES OF A LIE SITUATION

Just as there are particular features shared by lies, there are also particular features shared by all lie situations—whether these situation occur in the real world or are created in the laboratory.

Many of the contributors to this volume have addressed the effects of a number of these structural features on a child's propensity to lie. For example, Bussey discussed motives for the lie, the form of the lie, and the stakes for the lie; Ceci and DeSimone Leichtman examined motives for the lie, and the interrelationships between the liar and the target; Nigro and Snow investigated the characteristics and interrelationships of liar and target; and Tate and Warren examined motives for the lie, the form of the lie, and the presence or absence of a coach. These chapters have demonstrated that when these features are manipulated as independent variables, they affect the likelihood that a child will lie. However, those features that are not manipulated must also influence—either intentionally or unintentionally—the likelihood that a child will lie or tell the truth.

The best way to illustrate the potential effects of each of the structural features is to draw them out into basic categories—the lie, the scenario, and the people—and then show or speculate how they might influence children's truthfulness. First, there are the structural features of a lie:

1. The type and form of the lie.
2. The motive behind the lie.

Then there are the structural features of the deception scenario:

1. The stakes for telling a lie and the stakes for telling the truth.
2. The interval between the event and the liar's presentation of his or her account of that event.

[3]However, this is where the study of children's lies has a distinct ecological validity advantage over the study of adults' lies. Because most young children do not know when they are in a deception experiment, they choose of their own volition whether or not to lie to a target whom the children believe has not authorized the lie (but in fact the target registers whether or not they lie). Thus, these lies (save "tricking" lies) usually conform with Ekman's (1985) definition of a lie. Conversely, adult subjects sign consent forms informing them that they will be asked to lie sometime over the course of the experiment; it can be argued that the experiment itself authorizes the lie and thus the lies produced by adult subjects do not conform with Ekman's definition of a lie.

And finally, there are the interpersonal structural features:

1. The characteristics of the liar.
2. The characteristics of the target.
3. The presence or absence of a coach.
4. The presence or absence of others.

It should also be kept in mind that more often than not these features interact with each other. However, in order to get a handle on these interactions we must first measure or predict the effects of these features separately. For this reason, and for the sake of clarity, these features are addressed individually.

The Features of a Lie

The features of a lie in this sense are different from those discussed in the previous section. Although the earlier discussion focused on issues involved in defining a lie, this section deals with the outcome of that definition—the form of the lie, and the motivation behind it.

The Type and Form of the Lie. Even though a lie can take many different forms, there are only two basic types of lies. First, there are the types of lies that require the fabrication of an event; these lies take the form of multiword statements (e.g., telling someone that you built something you didn't; Tate & Warren, this volume), one word responses (e.g., "Did you know who broke my toy?", "No"; Ceci & DeSimone Leichtman, this volume), or gestures (e.g., nodding or pointing in a misleading direction; Chandler et al., 1989). Second, there are the types of lies that require concealment of an event (Ekman, 1985); these lies take the form of an absence of behavior, either in response to a direct question or in response to a compulsory disclosure (e.g., not volunteering the fact that a "thief" gave the child a severe head rubbing; Peters, 1990).

The amount of behavioral sophistication needed to deliver the different forms of lies in all likelihood affect the probability that a child will lie. For example, it is probably more difficult for a 3-year-old child to fabricate an allegation than to conceal an allegation; the former requires constructing a false allegation, while the latter requires saying nothing (as pointed out by Tate & Warren, this volume). It may not even be in the behavioral repertoire of 2- to 3-year-old children to fabricate an account of an event via a multiword statement (let alone a plausible multiword fabrication). However, one-word responses, gestures, and concealment lies are all in the behavioral repertoire of 2- and 3-year-old children. Thus, a child most likely will have the ability to lie by concealing or giving one word

answers before he or she has the ability to generate lies by multiword, multistatement accounts (see Leekam, this volume).

Because it is easier for a child to make a false statement by responding with a nod, a "yes," or a "no" than by responding with a narrative, a child may be more likely to lie when a target—via his or her line of questioning—constrains the form of a child's lie to these simpler forms. The following anecdote illustrates how this works. When I was 6 years old I heard it was dangerous to jump out of a second-story window; yet when I looked out of the second-story window of our house, this did not look very dangerous. I decided to jump. I survived unscathed, but feared greatly the punishment that I would receive if I told the truth as to why I jumped (my leap was discovered because I made the mistake of jumping out a window that was directly above the window where my mother and a neighbor were having coffee). While feigning injury (to forestall punishment), I debated whether or not I should lie or tell the truth (to avoid further punishment). Meanwhile, my mother and grandfather concocted a story that explained how I could have *accidentally* slipped out the window, somersaulted, and miraculously landed on my feet unharmed. They then asked me if this is what happened. All I had to do in order to tell the lie was either nod or say "yes," which I did. However, had they asked me "what happened?", I doubt I would have lied; and, if I did lie, it certainly would not have been very convincing. In this case, the way the question was posed made it so easy for me to lie that I did (this lie was so successful that my mother will only discover it if she reads this chapter).

Thus, the form in which the lie is delivered—multiword, one-word, gesture, or concealment—must impact the likelihood that a child will lie. It appears that children may be more likely to show an inclination to lie—for whatever reason—when the form of their lie is a simple one-word or simpler concealment response than when they must verbally produce details of an event that has not happened.

The Motive Behind the Lie. There are many motives for a child to lie. For example, Ekman (1989) drew up the following list of motives for children's lies (note that these are much the same motives for adults' lies): to avoid punishment, to get something a child couldn't get otherwise, to protect friends from trouble, to protect self or others from harm, to win admiration of others, to avoid creating an awkward social situation, to avoid embarrassment, to maintain privacy, and to demonstrate power over authority. Ceci, DeSimone, Putnick, Lee, and Toglia (1990) also add the motive to sustain a game, and the motive to conform with a stereotype. However, it seems that sustaining a game involves the prior consent of the target, and thus would not be classified as a lie under the prior consent of the target condition of Ekman's definition (see earlier section on features that define a lie).

It has already been noted by Tate and Warren (this volume) that it is the failure to take motives into account that is partly responsible for why there is a debate as

to when children develop the ability to lie.[4] The reason for this is that different motives often require different levels of behavioral complexity to deliver the lie. For example, considerably more complex thinking and behaviors are needed to create a lie to avoid an awkward social situation than is needed to merely gainsay the accusation of a punishable behavior (see chapters by Leekam and by Flanagan). For the former motive, a child must anticipate the feelings of the person who might feel awkward and then choose a course of behavior that will most effectively assuage the awkwardness of the situation, which may also require more verbal production and sophistication (Tate & Warren, this volume). This is in contrast to the latter motive, in which a simple denial or nonresponse to the accusation would suffice (see the section on the form of the lie).

Because the behaviors associated with these different motives require different levels of cognitive complexity, it is not surprising that the emergence and potency of each of these motives to lie seems to change with age for the child. For example, it has been reported that the majority of lies for 4-year-olds are lies to avoid punishment, while for 5-year-olds a greater percentage of their lies are trick or pretend lies (Bussey, 1990; Stouthamer-Loeber, 1987; both cited in Bussey, this volume). It is for these reasons that researchers have proposed that the ability and willingness of children to lie for these different motives follow a particular developmental progression from less to more complex; for example, children first generate lies for self-preservation (e.g., to avoid punishment and harm), and then add motives until they reach the level where they can generate lies for self-presentation (e.g., to win admiration), and finally complete their repertoire with the addition of altruistic lies (e.g., to avoid awkward social situations; Burton & Strichartz, this volume; Bussey, this volume; Ceci & DeSimone Leichtman, this volume; DePaulo & Jordan, 1982; Leekam, this volume; Tate & Warren, this volume).

The evidence from psychological experiments has suggested that children as young as 2½ to 3 years of age will lie for a number of different motives; it has been shown that 2½ -year-old children will deceive if it is in the context of a game

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[4]It is important to note that these structural features may inadvertently impact not only the question *when will a child lie*, but also the question *when can a child lie?* These are two are distinct questions. As we have seen, the *when will a child lie* question is answered by understanding the features of the lie, the situation, and the people involved, in order to determine the circumstances in which a child is more or less likely to lie, once he or she has the capacity to lie (other examples from this volume include Bussey; Ceci & DeSimone Leichtman; Nigro & Snow; and Tate & Warren).

The *when can a child lie* question is answered by understanding the child's mind to determine whether or not the child has the capability to lie, and at what age he or she gains this ability (examples from this volume: Burton & Strichartz; Flanagan; Leekam; and Haugaard & Reppucci). If a child *can't* lie, then the question whether he or she *will* lie becomes irrelevant. It is only at the age in which a child *can* engage in a particular kind of lie does the *will he or she lie* question becomes relevant. Even though it is beyond the scope of this chapter, we can speculate that the structural features described in this chapter impact *both* questions: the when *can* a child lie question, as well as the when *will* a child lie question.

(Chandler et al., 1989), or to trick someone (Tate & Warren–Leubacker, 1990, this volume); 3-year-olds will lie to avoid punishment (Lewis et al., 1989; Nigro & Snow, this volume), to protect a loved one, to get a reward, to sustain a game, and to conform with a stereotype (Ceci et al., 1990; Ceci & DeSimone, this volume). Eventually, by the time children reach the age of 6, they can and will lie for all of the motives mentioned in the beginning of this section (Ekman, 1989). Thus it seems that the ability and willingness of children to lie is contingent upon the specific motive to lie only when the children are between the ages of 2.5 and 6. To date, we know that children can lie to avoid punishment by the age of 3, and can lie to protect a loved one somewhere between 3 and 4, and so forth. However, the exact age at which children will lie to avoid creating an awkward situation, to avoid embarrassment, to maintain privacy, and to demonstrate power over, authority, has yet to be determined. However, as Bussey (this volume) has noted, just because a child has the capacity for a particular behavior does not necessarily mean that he or she will implement this behavior.

Ceci and DeSimone (this volume) concluded that children *will* lie when the motivational structure of a situation is tilted toward lying. In one sense this means that children—like adults—will be more likely to lie when the motive for a lie is sanctioned rather than unsanctioned. Thus, "tricking" lies (Tate & Warren, this volume), or a "white lie," such as a child telling Grandma that he or she really loved the pajamas with the attached feet when in fact the child really wanted a Nintendo—are sanctioned lies. A child whose motive for lying involves taking the credit for a good deed that the child did not do is telling an unsanctioned lie (e.g., Ceci & DeSimone Leichtman, this volume).

It is also true that the motives that make a lie unsanctioned to a child may also make a lie sanctioned to an adult, and vice versa; for example, many children rate "white" lies as negative as other more invidious lies (Bussey, this volume). This suggests that researchers must first assess what a child feels about the motive behind the lie, and not just assume what a child feels, before proceeding to generalize the results of a deception study.

In another sense, the tilting motivational structure means that a child realizes that certain situations sanction certain motives for certain lies; for example, it is OK to lie to avoid harm if this harm stems from the neighborhood bully. It is not OK to lie to avoid harm when the harm emanates from a parental spanking for misbehavior.

Finally, a change in the child's perception of a motive can sanction a previously unsanctioned motive to lie. The motive to avoid punishment will not sanction a lie when the punishment stems from the parent. However, if the child believes that this parental punishment is unjustified or undeserved for the offense, he or she may decide that the unjust nature of the punishment justifies telling a lie (Ekman, 1989).

Thus, each motive to lie must be understood within the situation in which it is embedded, as well as the child's perception and understanding of the situation as well as the motive. Understanding the child's perception of a motive may help

explain the results reported by Tate and Warren (this volume) that 5-year-old children were more likely to engage in a "tricking" lie than 2½-year-olds; 5-year-olds better understand that it is OK to "trick" people because the whole point of a tricking lie is to tell the target later that he or she was tricked (as Paul Ekman's 10-year-old daughter, Eve, has explained). Two-and-one-half-year-olds may not understand this, and to many of them this type of lie may be as "bad" (i.e., unsanctioned) as any other type of lie (see Bussey, this volume), which may explain their general reluctance to engage in a "tricking" lie.

The general point is that just because a 3-year-old is capable of lying to avoid punishment does not mean that he or she *will* lie to avoid punishment. Furthermore, because a 3-year-old will lie for one motive—for example, to avoid punishment—does not mean that he or she will lie for a different motive—for example, to avoid an awkward social situation. Bussey's argument (this volume) bears repeating: Children do not necessarily engage in all the behaviors in which they are proficient.

Scenario Structural Features

The features of a lie scenario are the product of many factors, such as the motives to lie and the people involved in the scenario. However, at this point it may be more useful to examine features of the scenario independent of the lie and the people.

The Stakes for Telling a Lie and for Telling the Truth. The patterns of rewards and punishments for lying or telling the truth—the *stakes*—remains one of the biggest obstacles to the ecological validity of deception paradigms (e.g., DePaulo et al., 1983; Ekman, 1985; Frank, 1989). Only recently has this feature of deception situations received attention in the area of children's deception research (e.g., Bussey, this volume; Ceci & DeSimone Leichtman, this volume; Peters, 1990). However, for reasons ranging from interest in low-stake scenarios to ethical prohibitions against high-stake situations, this feature has not been systematically explored, particularly with regard to the question as to whether or not a child will lie in high-stake situations.

The stakes for a deception scenario can be broken into separate rewards and punishments because each has opposite effects on the propensity to lie. For example, we can speculate that the more severe the threat of punishment for lying, the less likely the child is to lie. Likewise, Bussey (1990) and Peters (1990) have shown that the more severe the threat of punishment for telling the truth, the less likely the child is to tell the truth.

It is just as straightforward to propose that as the reward for successful lying increases, the child will be more likely to lie. We can also presume that situations in which the reward for truthfulness increases, so would the tendency to be

truthful (e.g., an adult's smile to a 3-year-old girl increases her likelihood to be honest; Nigro & Snow, this volume).

However, rarely in the real world do rewards for successful lying occur independent of punishments for unsuccessful lying. Yet rewards for successful lying are presented in the laboratory without the complementary, counterbalanced threat of punishment for unsuccessful lying (e.g., Kraut & Poe, 1980). Thus, we do not know how high the rewards for successful lying must be in relation to the punishments for unsuccessful lying in order for the child to lie. Moreover, we also do not know how the relative weight of these two elements needed to induce a lie or truthful statement changes with the child's age.

Finally, the fear of being caught in a lie versus the fear of telling the truth highlights questions concerning children's perceptions of the consequences of lying, compared with the consequences of the act about which they are lying. That is, what do children learn about the trouble they may get into for lying? Burton and Strichartz, and Bussey, address some of this in their chapters. Yet, in many households lying is an offense worse than any other transgression (Ekman, 1989). Are there things that can be done to enhance the child's belief that to lie about serious matters, even to lie about major transgressions, may be in itself a worse transgression? We need to evaluate how each child views the severity of his or her lie in relation to the transgression it is designed to conceal in order to assess more accurately the likelihood that a child will lie in a given situation.

The Interval Between an Event and the Liar's Presentation of His or Her Account of That Event. A child playing with his or her father's hacksaw breaks the blade. The father discovers this 2 hours later, and questions the child about possible involvement. What effect does this 2-hour interval have on the likelihood that the child will lie? What if the father questioned the child 5 minutes after it happened? What if it was 5 weeks? This time interval between an event and the initial inquiry—where the child may first have to actually tell a lie or the truth—is a feature of children's *deception* experiments that has received little attention to date (this is a key variable in children's *memory* research, however; e.g., Goodman, Aman, & Hirschman, 1987).

How do the laboratory manipulations of this interval compare with that found in the real world? As a general rule the procedure in laboratory research involves asking the child about an event within minutes after it has occurred (Ceci & DeSimone Leichtman, this volume, Lewis et al., 1989; Nigro & Snow, this volume; Peters, 1990; Tate & Warren, this volume). However, in typical abuse cases the initial interrogation of the child may not be for hours, days, weeks, or even months after the event (Mason-Ekman, 1989). What effect might this time interval have on the child's tendency to lie? We know that increasing intervals have an effect on adult eyewitness accuracy (Loftus, 1979). How might this decreasing memory of the event affect a young child's willingness to lie deliberately? We do not know this yet.

Interpersonal Structural Features

The final group of structural features that influence whether or not a child will lie is the nature of the interpersonal relationships between adults and children and the roles that each play in a deception situation. The child as well as the adult can accommodate the role of the liar, the target, the coach, or observer; moreover, each participant may play more than one role at a given time.

Characteristics of the Liar. It has been reported earlier that by the time children reach age 6 they will lie for all the motives mentioned earlier (Ekman, 1989). But are older children more likely to lie than younger children? Again, this may depend on the motivation to lie; for example, there may be no difference between older and younger children in their likelihood to lie to avoid punishment due to the fact that it is one of the first motives to emerge in the child, and it remains the most frequent motive to lie into adulthood (Bussey, 1990; Ekman, 1989). However, there are differences between younger and older children in the likelihood to lie to trick someone such that older children are more likely to engage in the trick lie (Tate & Warren, this volume). Thus, the motives to lie, as discussed earlier in this chapter as well as elsewhere in this volume (Bussey; Ceci & DeSimone Leichtman; Flanagan; Leekam; Tate & Warren), may influence age-related differences in the likelihood that a child will lie.

Are there personality factors that might influence a child to lie? Ekman's (1989) analysis of the Hartshorne and May (1928) study suggested that more intelligent children are less likely to lie because they are more likely to recognize the risks for getting caught; however, when the odds of being caught in the lie are negligible, the more as well as the less intelligent children seem as likely to lie. Machiavellianism also seems to be a personality trait that predisposes certain children to be more likely to lie; however, this trait does not seem to manifest itself until around the age of 10, and so may be irrelevant to this analysis (Braginsky, 1970). Therefore it seems as though Hartshorne and May's (1928) original conclusion is still valid—that situational factors such as the stakes for the lie, the motivation to lie, the sanctioned and unsanctioned nature of the lie, and so forth, tend to outweigh personality factors in predicting whether or not a child will lie.

The Characteristics of the Target. The child's perception of the target seems to influence the likelihood that a child will choose to lie. For example, preliminary results reported in Ceci et al. (1990) suggest that when the target is a negatively evaluated person the child is more likely to lie about this person's actions. The converse may also apply: It may be that children are less likely to lie if the target is positively evaluated by the child.

The target's age is another factor; children seem more ready to lie to children

of their own age—in the context of tricks and games—than to adults (Tate & Warren, this volume). However, research has also shown that children are more likely to give erroneous and misleading information to adults than to children (Ceci, Ross, & Toglia, 1987). Again understanding motives may clarify this situation. For example, because adults are a more potent agent of punishment than children, a child may be more likely to lie to an adult to avoid punishment than to lie to another child to avoid punishment. However, a child may be more likely to lie to play a trick on another child than to play a trick on an adult.

The nature of the child (liar)–target relationship is also important to consider; generally speaking, if the child shares values with the target, or respects the target, he or she will be less likely to lie to the target due to the increased guilt the child would feel when lying (Ekman, 1989). A child who hates a target may not feel such guilt about lying to the target and may actually be more inclined to lie to a despised target. However, there are exceptions to these rules; Ceci and De-Simone Leichtman (this volume) have shown that a child is more likely to lie to a respected loved one when protecting this loved one from trouble. But if the child believes that the target is an effective lie-catcher, the child may also be less inclined to lie to this target (Ekman, 1985). Finally, the behavior of the target can differentially affect the likelihood that different liars (in this case, boys and girls) will lie; Nigro and Snow (this volume) have shown that 3-year-old girls are less likely to lie when the target smiles while questioning them, and 3-year-old boys are less likely to lie when the target stares while questioning them.

The actual presence, or implied future presence, of a target or assailant must also affect a child's truthfulness. Peters (1990) and Bussey (1990) have shown that a threatening person can inhibit a child's truthfulness. What if this person leaves the room, or is hidden behind a screen—is the child more likely to disclose honestly an event such as abuse? Might the opposite occur such that to keep the target out of the physical presence of the child increases the chance that a child might lie? This debate was at the heart of two recent Supreme Court rulings. In *Coy v. Iowa* (1988), the court ruled that placing a screen between a defendant and the child witness/victim violated the defendant's Sixth Amendment right to confront his or her accusers—based on the presumption of Justice Scalia that it is harder to lie to someone face to face than behind his or her back.[5] In *Craig v. Maryland* (1990), the court ruled that it is constitutional for a child to testify via closed-circuit TV from a room separate from the defendant as long as

[5]Justice Scalia stated: "It is always more difficult to tell a lie about a person 'to his face' than 'behind his back.' In the former context, even if the lie is told, it will often be told less convincingly. . . . The state can hardly gainsay the profound effect upon a witness of standing in the presence of the person the witness accuses, since that is the very phenomenon it relies upon to establish the potential 'trauma' that allegedly justified the extraordinary procedure in the present case. That face-to-face presence may, unfortunately, upset the truthful rape victim or abused child; but by the same token it may confound and undo the false accuser, or reveal the child coached by a malevolent adult" (*Coy v. Iowa*, 1988, pp. 1019–1020).

the judge and jury can see enough of the child's demeanor to weigh the credibility of his or her testimony. However, the effect of a physical or psychological barrier on a child's likelihood to tell the truth or lie has not been determined.

The Presence or Absence of a Coach. One specific role assigned to adults in lie situations is that of a coach (Tate & Warren-Leubacker, 1990; Tate & Warren, this volume). In the Tate and Warren studies, the coach was on friendly terms with the children and many of them chose to participate in the lie ("trick"). However, is it possible that an unfriendly or threatening coach could make a child fabricate a story about someone else, (e.g., a tricking lie)? What would happen if the coach was a parent who threatened the child against telling the truth? Studies have shown that a threatening target (coach?) can inhibit truthfulness in a child via concealment lies (Bussey, 1990; Peters, 1990). Could this threatening coach make a child lie about the actions of a loved one, such as one of the child's parents? Would a child be likely to maintain a coached lie designed to harm when the coach is one parent and the target another? Does a coach's effect on a child liar disappear when the coach is removed from all future contact with the child? These questions need to be examined in light of the surprisingly high number of child custody cases in which it appears as if the child had been coached to fabricate an abuse allegation (Jones & McGraw, 1987; Mason-Ekman, 1989).

Finally, we can ask the converse question: Can you coach a child to be truthful? What happens if you say to the child that it is very important that you tell the truth? What effect would that have on the children in the paradigms described in this volume? In other words, what is the antidote to coaching a child into a lie? How do we reduce the likelihood that a child will lie or inoculate the child against lying?

The Presence or Absence of Others. In order to obtain the most accurate prediction of whether or not a given child will lie in a given situation, the effect of other observers and participants on the child must be assessed. For example, in a sexual abuse case a number of different people are brought to bear on the child—that is, social workers, psychologists, police officers, a judge, and other family and friends, and so on. What effect do these people have on the child's propensity to be truthful or deceptive?

The presence of this investigatory team in an abuse case also creates a numerical disparity on the side of the case that believes that a crime has occurred. Only the defense attorney and the defendant/alleged perpetrator are on the side that believes a crime has not occurred. We do not know what effect a large number of people holding a certain expectancy has on the likelihood that the child will lie, or, if the child has initially lied, the likelihood that the child will buck the expectancies and recant before the case goes to trial. It seems reasonable to suggest that being surrounded by people who believe an offense has occurred will

make the child who is concealing abuse be more likely to disclose this abuse; however, the converse may also apply in that it might be more likely for the child who has not been abused to claim that abuse has occurred.

Interaction of Features

It is important to reiterate that these features do not usually operate independent of one another. Many of the unanswered questions in the study of children's lies involve the interaction of a number of these structural features. For example, what do we know about the relationship between the stakes and the type and form of the lie? Is it the case that as the stakes increase linearly, the child is increasingly more likely to engage in a concealment lie? (such as a child concealing the truth; Bussey, 1990; Peters, 1990). Yet as stakes rise might it be the case that this relationship is curvilinear for one word or gestural forms of lies, and negatively related to multiword fabrications? We do not know what these relationships might be due to the fact that we do not have any systematic data from the high arousal end of the stakes continuum.

Now what happens if a third variable is added, such as motives? We can ask, "Will a 3-year-old child engage in a concealment lie to protect a loved one when the stakes for lying are so high as to create near paralyzing arousal levels?" Will a 3-year-old child engage in a multiword fabrication under these conditions, or is it the case that this child will only engage in a concealment lie for this motive at this arousal level? Now what if we add a coach to this equation, and ask, "Will a child lie to protect a loved one under extremely high arousal levels when the child is being coached by another adult loved one?". How much lower must the stakes be in order to allow this 3-year-old child to present a multiword fabrication as well as conceal? What if the motive was to avoid punishment, or to gain a reward? What form of lie could the child engage for this motive, and under what stakes? These are all questions that have remained unanswered to date.

An Example. An experiment reported in this volume illustrates how the structural-features-as-independent-variables effect and interacts with some of the nonmanipulated structural features. In Nigro and Snow's experiment, the independent variables were the characteristics of the liar (in this case, gender) and the characteristics of the target (smiling or staring teacher). The lies told in this experiment had a particular form (one word or gestural), a motive (to avoid punishment or trouble), particular stakes—a reward for successful lying (satisfying their curiosity without being punished), a punishment for unsuccessful lying (the possible anger of the experimenter), an interval between peeking at the toy and being asked to whether or not they peeked (within seconds of peeking, if they peeked), and all done in the presence of an inattentive observer (the child's parent was in the room).

Nigro and Snow report that 3-year-old boys were more likely to lie when they were smiled at by the experimenter, whereas 3-year-old girls were less likely to lie when smiled at. What happens if we change the focus of our analysis to the nonmanipulated structural features? What happens if we change the values assigned to these features? What might have happened if the children were asked, "Tell me everything you did when I was out of the room"? Now how many children would produce the narrative needed to lie? What if the experimenter told the children not to peek because the person who correctly guesses what the toy is wins a big prize? Would changing the motive for lying from avoiding punishment or disapproval to gaining a reward change the results such that both boys and girls would disclose that they peeked at equal rates, independent of the target's smiling? (Given that boys seem to be punished more for transgressions than girls [Sears, Maccoby, & Levin, 1957], avoiding punishment might have a slightly stronger potency for boys.) In other words, to what extent are these results for liar and target characteristics contingent upon just those experimentally manipulated variables, or do the other structural variables such as motive and time interval help create that particular result?

CONCLUSION

This chapter described a number of features that form the structure of both lies and deception scenarios, and showed, when the data permitted, and speculated otherwise, how these features may influence children's deceptive behavior.

The effects of these features are not limited to those features that undergo direct experimental manipulation. Because each one of these features appear in various forms in all deception situations, they cannot do anything but influence the likelihood of deception. So while measuring the main independent variables, it can be the case that the other structural features are exerting an equally strong effect on a child's tendency to lie or be truthful.

The effect of these structural features on whether or not an adult will lie has not been addressed in the adult deception literature because virtually no adult studies allow a subject to choose whether or not to lie. Certain experiments will allow subjects to choose when to lie, or which question to lie to (e.g., Frank, 1989), but do not allow the subject to choose whether or not to lie at all. Experiments have usually randomly assigned individuals to lie or tell the truth because these experiments have been more interested in clues to deceit and people's ability to detect deception than whether or not they will lie (e.g., Kraut & Poe, 1980).

In contrast, the children's literature has been focused more on the conditions

under which the children will lie. Thus, clearly delineating the value of the structural features in children's studies takes on greater importance than in adult studies because the value assigned to these structural features directly impacts the dependent variable, whether or not a child will lie.

Finally, there are a number of benefits to listing, defining, and estimating the effect of each of these features on a child's propensity to lie. First, explicitly identifying these features ensures that each feature is not overlooked both when designing and interpreting deception research; in other words, so that we can be sure the rate at which children lie in an experiment is caused by the variables we think caused the effect. Second, it allows us to compare more easily the results of a laboratory experiment to the real-world situation it was designed to model by making a feature by feature comparison across both situations. And third, it allows us to predict more accurately the outcome of situations in which deception is a possible response; one can determine the value of each feature and estimate how it may compel or deter a child from lying.

What all these speculations and analyses suggest is that one ask the following 10 questions about any children's deception study in order to understand, generalize, or model deception experiments:

1. Is the child deliberately presenting misleading information, or is it merely a memory distortion or honest difference of opinion?
2. Has either the target or the situation presented the child with authorization to present misleading information?
3. Does the investigator word questions in such a way that a child has merely to respond with a one-word answer to lie, or must the child respond with some sort of narrative? Or, how does an investigator get a child to admit a fact in which he or she is concealing, without leading the child into presenting false information?
4. Are there motives for the child to lie, and if so, what are they?
5. What are the stakes? That is, what are the patterns of rewards for successful lying, risks or punishments for unsuccessful lying, rewards for truth telling, and risks and punishments for truth telling?
6. How long after the alleged event was the child questioned?
7. What are the characteristics of this particular child?
8. What are the characteristics of the target, is this target in the presence of the child, and what is the child's relationship to the target?
9. Is there a coach, and what is the child's relationship to him or her, either now or in the future?
10. Are there other people involved, how many are there, and how many hold what expectancies about the particular situation?

By no means should this list be considered an exhaustive list of questions to ask or list of structural features. Although every situation involves motives, stakes, people, and so forth, there are other characteristics which may affect a child's likelihood of lying. For example, what happens when a child is questioned about something that he or she has very limited knowledge, such as sexual behavior? However, the point here is that every deception scenario has in common each structural feature mentioned in this chapter.

Clearly, our knowledge of children's abilities and proclivities to lie is in its infancy. Hopefully the framework presented in this chapter revealed some of the holes in our knowledge, as well as raised a number of questions that will help guide future research piece together the entire picture of children's lies. It is only when we more fully understand how the values of these structural features influence the likelihood that a child will lie can we begin to generalize confidently the results of laboratory research to such dramatic and serious situations as children's courtroom testimony.

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10 Commentary: The Occasions of Perjury

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THE INCIDENCE OF CHILDREN'S PERJURY

The legal concept of perjury is strikingly similar to the social science definition (Burton & Strichartz, Leekam, this volume). *Perjury* is a crime, typically defined as:

> [T]he intentional making of a false written or oral statement in, or for use in, a judicial proceeding, or any proceeding before a board or official, wherein such board or official is authorized to take testimony. In order to constitute perjury the false statement must be made under sanction of an oath or an equivalent affirmation, and must relate to matter material to the issue or question in controversy.
>
> It is a necessary element of the offense that the accused knew the statement to be false; but an unqualified statement of that which one does not know or definitely believe to be true is equivalent to a statement of that which he knows to be false. (Louisiana Revised Statutes 14:123, 1989; see, for similar statutes, e.g., Florida Statutes Annotated § 837.021; Washington Statutes 9a.72.020)

As this definition suggests, the witness must know that the statement is false and must intend to deceive the trier of fact. Though not explicit, the intended goal of the perjurious speaker must be to manipulate the belief of the trier of fact—to convince the court that the witness' version of the facts is the accurate one. False swearing on documents and statements made out of court are also crimes, but they are not considered as serious as perjury made in the course of a trial and usually carry lesser penalties (see e.g., Louisiana Revised Statutes 14:124 ["false swearing"]; Washington Statutes 9a.72.40 ["false swearing"]).