

ADULT CAREGIVERS' BEHAVIORAL RESPONSES TO CHILD NONCOMPLIANCE IN PUBLIC SETTINGS: GENDER DIFFERENCES AND THE ROLE OF POSITIVE AND NEGATIVE TOUCH

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ABSTRACT: We examined differences in male and female caregivers' behavioral styles, and their use of negative or positive touch in noncompliance episodes with preschool-aged children that occurred in public settings. Coders reliably coded adult caregiver behavioral style (authoritarian-type, authoritative-type, and permissive-type), positive and negative touch, and children's latency to comply, as well as the child's demeanor at the end of the noncompliance event. Surprisingly, almost a quarter of all children were touched negatively by adults during these public episodes. Contrary to expectations based on self-report and laboratory studies, male caregivers were more likely to use touch in noncompliance episodes with children, and more likely to use positive touch, than female caregivers. Adult caregiver behavioral style, and positive versus negative touch were each related to children's responses in the noncompliance episodes. This work extends the findings of earlier studies about adult caregiver behavioral styles and highlights the use of positive versus negative touch as an important behavioral context for compliance requests of young children. Further, child demeanor is a crucial measure of the success of parenting behavior in noncompliance episodes because it indexes behavior occurring after compliance occurs, but which has the potential to be a significant influence on family harmony. The use of naturalistic observational methodology is suggested as a

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critical step in validating findings on harsh discipline and corporal punishment that rely on methods in which social desirability may be a confound.

KEYWORDS: child compliance, caregiver behavior, positive touch, discipline, public setting, preschoolers

In the years since the start of Baumrind's influential work identifying typical parenting styles and their developmental ramifications (Baumrind, 1966, 1973, 1975, 1978), public awareness and public policy related to parenting practices has broadened dramatically. As well, behavioral research has resulted in an exponential increase of our knowledge of the "what" and "how" of the variability in behavioral styles and the child development outcomes to which they are related. Baumrind argued, for example, that parenting based solely on the demand for child compliance to parental authority (authoritarian style) tends to impair the child's ability to internalize rules, and that warmth has a positive effect on child outcomes, regardless of the style of parenting involved (Baumrind, 1968). Many other studies have confirmed and extended Baumrind's findings. Her labels for three key parenting styles: *authoritarian*, *authoritative*, and *permissive*, have become part of the lexicon of child and family service professionals, and of child development scholars. Over the same period of time, a collective concern about interpersonal violence and about the community's responsibility for interpersonal violence has emerged. And, not surprisingly, the national conversation about parental discipline strategies that has focused on harsh, negative, or aggressive touch has become increasingly heated. These are important issues to understand, and behavioral scientists have applied their methodologies and theoretical knowledge to this problem accordingly.

Most behavioral scientists acknowledge the primacy of early childhood experiences for the development of key aspects of personality and behavior. Compliance with adult demands is a constant in the lives of youngsters, with episodes containing adult demands occurring hourly. These episodes are likely a stage on which the individual differences in parenting behavior, discussed by Baumrind, may be observed. Child compliance is a fundamental concern for most parents, and, as a mechanism of socialization, for the community at large as well. Laboratory and in-home observations (Denham, Renwick, & Holt, 1991; Kochanska, Kuczynski, & Radke-Yarrow, 1989; Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987), as well as survey, questionnaire, parent diary, and interview studies (Chamberlain & Patterson, 1995; Kremer, Smith, & Lawrence, 2010; Locke & Prinz, 2002) have provided a great deal of information about the types of discipline strategies employed in compliance interactions with young children, and about the immediate effects of various parental discipline strategies on preschoolers' behavior. In addition, prospective longitudinal and retrospective

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studies have elucidated the long-term effects of discipline patterns on the developing child. An important characteristic of most studies in this area is that they have (appropriately) relied on the participation of families who are aware that they are being studied by researchers. For example, a meta-analysis of 33 observational studies involving abusive, neglectful, and non-maltreating parental behavior (Wilson, Rack, Shi, & Norris, 2008) contained, of necessity, only researcher-controlled settings. Naturalistic observations, however, are possible with typical families, but are almost never done. As a result, the amassed data in this area have been subject to the bias of social desirability, and this bias may be particularly salient to parents in the context of a heightened cultural attention to discipline/compliance episodes. An additional problem with laboratory or in-home observational studies of compliance-related parenting practices is our inability to capture the entire repertoire of behaviors that adults use in real life settings. We suggest that gathering additional information, using methodology such as naturalistic observations of behavior in public settings, may solidify our knowledge, perhaps contradict some of what we understand to be true, and may provide information that was simply not previously available through traditional laboratory methods. Our purpose in the present study was to take a step toward this by observing adults involved in noncompliance episodes with preschool age children in public settings, in which they were unaware of being studied.

Adult Caregiver Behavioral Styles

It may be helpful to examine new questions related to adults' roles in young children's compliance behavior within the framework of Baumrind's well-characterized parenting style categories (Baumrind, 1967), because the categories themselves have been studied so extensively. Very briefly, *Authoritative* parents were described as flexible, setting clear rules while allowing some freedom, explaining rationales for those rules, and consistently enforcing the established rules. Authoritative parents combine control and encouragement in their discipline style. On the other hand, the *Authoritarian* parent is highly restrictive, imposes many rules, expects strict obedience, and often relies on power tactics such as physical punishment and threats to gain compliance. *Permissive* parents are characterized by a lax pattern of interaction with children, during which they make relatively few demands on the children, encourage children to express feelings and impulses, and are inconsistent in establishing and enforcing rules. *Rejecting-neglecting (disengaged)*, a category that was delineated later in Baumrind's research, describes parents who do not monitor child activities, and do not provide support or structure for the child in the home. They may actively

reject the child or completely avoid responsibility for raising the child (Baumrind, 1991).

Although these patterns were originally identified in the context of parent-child relationships, researchers and clinicians have successfully applied this conceptualization of parenting styles to other important relationships in children's lives (Rohrkemper, 1984). This application is appropriate because the patterns identified by Baumrind have, at their core, several fundamental characteristics of relationships in general: individual differences in consistency, bidirectional communication, warmth, and nurturance. Research with other adults has shown that when children interact with authoritative adults who play key roles in their lives (teachers, preschool caregivers, regular babysitters), they learn more (Walker, 2008), are more positively engaged (Walker, 2009; Wentzel, 1997, 2002), and are more likely to avoid negative psychosocial outcomes (Hawkins, Doueck, & Lishner, 1988; Simons-Morton, Crump, Haynie, & Saylor, 1999).

Long Term Outcomes

Authoritative parenting has been linked with positive developmental outcomes, including behaviors related to child compliance patterns, in both in both naturalistic and experimental settings (Kuczynski, 1984; Simons & Conger, 2007; Stayton & Ainsworth, 1973). Baumrind (1989), for example, reported that preschool-age children of parents displaying a pattern of authoritative parenting showed higher confidence, better mood, and stronger self-control. On the other hand, both permissive and authoritarian parenting styles have been reported to be negatively correlated with child compliance (Larzelere & Merenda, 1994; Larzelere, Sather, Schneider, Larson, & Pike, 1998; Lytton & Zwirner, 1975). A more developmentally advanced version of compliance, conscientiousness, was also linked to authoritative parenting in high school students (Heaven & Ciarrochi, 2008). It is important to note, however, that the effects of the specific patterns identified by Baumrind may be more pronounced in white, middle-class samples (Chao, 2001; Livas-Dlott et al., 2010; Locke & Prinz, 2002; Park & Bauer, 2002), perhaps because the characteristics comprising the authoritative or authoritarian style have different meanings in other cultures or classes (Lareau, 2002).

Proximal Behavior and Immediate Outcomes

Child care challenges, such as preventing a tantrum in the grocery store, or accomplishing a conflict-free transition to sleep, pose two requirements for parents: 1) to obtain child compliance with the rule or request, and 2) to accomplish this in such a way that the child is not so angry, frustrated, or sad that

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a second noncompliance event ensues. Long term predictive outcomes, such as an increased risk for child externalizing behavior problems based on early exposure to authoritarian parenting, are unlikely to be of concern to the adult at the moment of conflict. Thus, in addition to methods designed to understand discipline and compliance events in terms of global parenting styles, attention to proximal factors – the specific behaviors, verbalizations, and emotional expressions of the participants – is critical. These effects on immediate compliance are nontrivial, because they are likely to be embedded in the profile of behavioral responses and preferences that form the *ambiance* of family interactions going forward. Historically, the immediate behavioral responses of children to adult requests for compliance were studied rigorously by researchers using behaviorally-oriented experimental methodology (Cheyne & Walters, 1969; Parke, 1969; Walters & Parke, 1964; Walters, Parke, & Cane, 1965). The findings of those studies indicated that children responded to punishment by inhibiting behavior differentially according to the timing of punishment, method of administration of punishment, type of punishment, exposure to a model being punished, etc. Compliance was often operationalized as the child's ability to avoid the prohibited behavior, but other outcomes, such as the child's emotional state after compliance, were not examined. Additionally, in many of the original experimental studies, the effects were viewed as occurring solely within the behavioral domain, with adult instructions and commands causing child behavior.

Examining noncompliance episodes from an ecological point of view, on the other hand, in which multiple processes or events (e.g., history with parent, child mood, setting, contemporaneous parental behavior) might influence child outcomes, provides a broader, and perhaps more accurate, perspective. Of particular interest are the immediate emotional effects of specific parenting behaviors on children, such as those described by Patterson (Chamberlain & Patterson, 1995) that occur in parent-child discipline sequences in which parental behavior and child behavioral and emotional responses often have mutually coercive effects (Patterson, 2002). Two variables, in particular, are likely to be salient for parents in the throes of a compliance episode with a young child: the time it takes for the child to comply with a request (*latency*), and alluded to earlier, the child's emotional state at the resolution of the conflict (*demeanor*). Beyond compliance, these proximal outcomes are likely to be vital to the ongoing stress level of the family, and as such may influence adult discipline strategies as much as parental attitudes toward discipline would do. The combination of latency to comply with parental requests and the valence of child demeanor at the end of a noncompliance episode can be seen as a marker of discipline effectiveness. Furthermore, positive child demeanor may indicate committed

compliance and shared positive affect—qualities that are critical for the internalization of social rules and values (Kochanska, 1997; Kochanska, Aksan, & Koenig, 1995; Kuczynski & Kochanska, 1995).

Positive and Negative Touch

Research on the effects of parental touch on preschoolers' responses to discipline has focused mainly on negative physical discipline. Although there is broad agreement that negative or harsh touch will not produce positive effects on child development (Fine, Trentacosta, Izard, Mostow, & Campbell, 2004; Harper, Brown, Arias, & Brody, 2006; Herrenkohl & Russo, 2001), there is significant debate regarding the extent to which physical discipline, such as spanking, produces short term or long term negative outcomes for children (Baumrind, 1996; Larzelere & Baumrind, 2010; MacMillan et al., 2000; Straus, 2005). It is beyond the scope of this paper to analyze the points of merit in such a debate. Instead, we wish to focus on the proximal effects of both *negative* and *positive* touch on children's latency to comply and on their demeanor at the end of compliance/noncompliance or discipline episodes.²

Positive Touch in Noncompliance Episodes

Surprisingly, the proximal effects of positive touch (e.g., tickling, hugging, stroking) by adults have rarely been studied in compliance episodes with preschoolers. The beneficial effects of positive touch have been demonstrated in a variety of other contexts, however, and those findings suggest that positive touch should improve outcomes during a discipline episode. Regulation of offspring behavior and emotional states by species-salient positive touch (licking, grooming, ventral/ventral contact) have frequently been documented in nonhuman animals (Hofer, 1994; Stanton, Wallstrom, & Levine, 1987). Additionally, developmentalists who study emerging human behavior have long known the detrimental effects of a lack of positive physical touch on normal child development (Drotar, Stern, & Polmar, 1976; Spitz, 1945). The effects of massage or tactile stimulation on preterm infant outcomes have also been investigated, demonstrating positive influences on weight gain and stress hormone production (Field, 2011). Stable preterm infants gain more weight after five days of massage therapy (Dieter, Field, Hernandez-Reif, Emory, & Redzepi, 2003; Field, 2011; Harrison, Williams, Berbaum, Stern, & Leeper, 2000; Hughes, Ladas, Rooney, &

² In this paper, we use the terms "compliance episode," "noncompliance episode," and "discipline episode" interchangeably.

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Kelly, 2008), and those receiving a massage intervention show increased learning ability (de Roiste & Bushnell, 1993), and reduced behavioral distress (Harrison, et al., 2000). For normally-developing infants and children, positive physical touch appears to be universally beneficial. For example, positive touch appears to facilitate the shared positive affect that is known to contribute to children's committed compliance (Kochanska & Aksan, 1995). In one study, preschoolers who had been randomly assigned to regular massage showed more positive behavioral ratings on state, vocalization, activity and cooperation immediately after the massage, and were rated more positively by their teachers than children in the control group, at the end of the study (Field, Kilmer, Hernandez-Reif, & Burman, 1996). This finding is consistent with the results of other studies showing the behavioral benefits of positive interpersonal touch in a variety of settings, including the classroom, adult work environments, and before or after medical procedures (Field, 2011; Hawkins, Doueck, & Lishner, 1988). Moreover, some studies indicate that these positive effects for children are long lasting (Adamson-Macedo, Dattani, Wilson, & De Carvalho, 1993). Recently, Takeuchi and his colleagues (Takeuchi et al., 2010), using retrospective methods, investigated the effect of parental touch during childhood on attachment styles and depression in adulthood. According to their findings, people who reported having had more positive parental touch experiences early in childhood also reported lower levels of depression and better perceptions of their romantic partners in adolescence and early adulthood. These studies suggest that a fuller investigation of the use of positive touch with children beyond infancy, and in other settings, would be warranted.

Negative Touch in Noncompliance Episodes

In contrast, there is a great deal of evidence that children who are spanked, hit, or slapped by parents are later more likely to behave aggressively themselves (Egeland, 1997; Fine et al., 2004; Herrenkohl & Russo, 2001; Sheline, Skipper, & Broadhead, 1994; Stormshak, Bierman, McMahon, & Lengua, 2000; Strassberg, Dodge, Pettit, & Bates, 1994), or to show poor psychological adjustment (Harper et al., 2006). Grogan-Kaylor (2005) also found that children who received higher levels of harsh physical discipline showed more antisocial behaviors than children exposed to lower levels of such discipline techniques. Further, Schwartz and colleagues (Schwartz, Dodge, Pettit, & Bates, 2000) reported that children, especially boys, who experienced harsh parental discipline in preschool experienced more peer victimization in third and fourth grade. Colder and colleagues (Colder, Lochman, & Wells, 1997) reported that harsh discipline was

associated not only with children's aggressive behavior but with children's depressed mood as well, indicating a long term relationship between negative physical touch and children's emotional states.

This characterization of the effects of physical discipline on child development, however, may require a differentiation by family context that has not always been made (McLoyd, Kaplan, Hardaway, & Wood, 2007; Thomas & Dettlaff, 2011). A more nuanced examination of findings in this area suggests that race, ethnicity, and culture often moderate the effects of physical discipline, such that it is associated with fewer problems, and in some cases favorable outcomes for African American children (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004; Polaha, Larzelere, Shapiro, & Pettit, 2004) as opposed to European American children. This reversal in the direction of effects is true for African American children in families that endorse physical punishment as a standard discipline practice, in which spanking may be viewed by the child as a cultural norm, and when accompanied by generally warm parental-child interactions (Deater-Deckard & Dodge, 1997; McLoyd et al., 2007). The definitional issues involved in the research on physical discipline have been problematic, and a definitive statement on the value of physical punishment for children from different cultural backgrounds is far beyond the purview of this article. Conceptualizing negative physical contact between adults and children as impacting immediate child responses seems warranted by the results of any of these studies.

Gender Differences

Societal expectations that fathers will become actively involved with their children have increased over the past half century (Coltrane & Adams, 2008; Jia & Schoppe-Sullivan, 2011; LaRossa, 1988; E. H. Pleck & Pleck, 1997). Although some studies show that fathers do not differ from mothers in their care of infants and toddlers (Averett, Gennetian, & Peters, 2005), most research still finds that women and men parent differently in a variety of ways, and that parenting roles are still significantly intact. For example, studies indicate that mothers provide more daily necessities (e.g., clothing, feeding, changing diapers) than fathers, and that fathers are more likely than mothers to engage children in play (Bronte-Tinkew, Carrano, Horowitz & Kinukawa, 2008; Coltrane, 1997; J. H. Pleck, Masciadrelli, & Lamb, 2004; Sayer, Bianchi, & Robinson, 2004; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). Mothers are characterized as nurturing and supportive in the traditional, affective sense (Brown & Barbarin, 1996; Klein, O'Bryant, & Hopkins, 1996; Starrels, 1994), and they report more involvement with their infants than do fathers (Tikotzky, Sadeh, & Glickman-Gavrieli, 2011).

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Fathers are described, and describe themselves, as problem-solvers, disciplinarians, and providers (Brown & Barbarin, 1996; Rochlen, Suizzo, McKelley, & Scaringi, 2008), as more authoritarian and less authoritative (Klein et al., 1996), and as less nurturing toward their children than do mothers. In one set of studies, for example, fathers were less likely than mothers to use gentle guidance during a clean-up task (Bandon & Volling, 2008; Volling, Bandon, & Gorvine, 2006). This “father profile” appears to be especially true for fathers from low socioeconomic status (SES) groups (Lareau, 2002). Greater gender differences in parenting are reported for families with lower SES rankings, and in families belonging to minority groups (Deater-Deckard, Lansford, Dodge, Pettit, & Bates, 2003; Dodge, Pettit, & Bates 1994; Lareau, 2002; McLoyd, 1990; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000).

Current Study

Here we present data gathered naturalistically in public settings on the use of positive and negative touch by men and women with preschool-age children in noncompliance episodes. First, we analyzed associations between adult caregiver behavioral style, and presence/absence and type of touch, in the context of adult gender. Second, we tested the effects of these patterns on children’s immediate behavioral and emotional responses. We expected that authoritative-type behavioral style, as opposed to the other styles, would be associated with shorter latencies to comply in noncompliance episodes, and with better child demeanor at the end of the episode. We also expected that negative touch would be associated with more negative child demeanor, and with longer latencies to comply with adult caregiver requests, and that positive touch would be associated with better scores on both of these measures. Last, we expected that the effects of negative touch would be more pronounced when used by male caregivers than by female caregivers.

Method

Observed Individuals

One hundred and six adult-child interactions were systematically observed in naturalistic settings in a large city in the southwest United States. Observed individuals were 31 male caregivers, 74 female caregivers, 62 preschool-age males, and 43 preschool-age females. It is possible that some of the adults we observed were not the fathers or mothers of these children. Although we believe

this number is likely to have been small, we will refer to our adult participants³ throughout this report as “male caregiver,” “female caregiver,” or “adult caregivers” in order to be completely accurate. The participants were selected based on the characteristics of the adult-child pair or “family” group (depending upon the number of adults present), and on adult caregiver characteristics and behavior, to insure, as much as possible, that those observed were parents caring for their children. The majority of the observations were done at restaurants during mealtimes because sitting and eating served as a sort of delimiter for the space in which the behavior of interest might occur and in which the coders could observe unnoticed. Identifying the setting for observation prior to documenting the noncompliance incidents also allowed one opportunity for coders to assess if the participants were parents and children—observers could be somewhat closer to the participants (sitting at the next table in the restaurant, for example) and focus solely on the interaction, rather than trying to push a shopping cart, walk through a room without running into something, etc. in order to maintain observation throughout the episode.

Family relationships were indicated, for the purposes of these observations, when one of the following occurred with the adult or adults in question: a) called themselves or each other “mother” or “father” or some derivation of either, or the child used one of these appellations for the adult; b) appeared to be in their twenties, were present with an opposite sex partner, and a child who resembled one of the adults; c) completed tasks usually reserved for parents, such as face and nose wiping, diaper changing, instructions on safety rules, and how and what to eat, and so on; d) paying for activities or food; e) in conversation, referring to events that occurred “at home.” Even with these criteria, our methodology did not allow true confirmation that our observed participants were actually the parents of the children involved. The use of resemblance as one selection criterion for identifying caregiver/child pairs may have been particularly problematic because it likely meant that children whose caregivers were serving as foster, adoptive, or step-parents, who would be less similar in appearance to their caregivers, were overlooked as potential sources of data. Identification of sources of parent-child data for future studies will be more accurate if this criterion is not used.

The study was approved by the Institutional Review Board at the primary investigator’s university. Observed individuals were not approached for consent; the observations were all public, and there was no contact between researchers

³ Although the term “gender” is sometimes used throughout this report, with reference to both the adult caregivers and the children, we were not able to assess gender identity or gender roles due to the nature of the methodology. Thus, the term gender, in this context, refers to what we determined to be the biological sex of the individual during the live observations.

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and observed individuals. No identifying information about any of the observed individuals was recorded. The dataset of observed noncompliance episodes was comprised of 18 male caregiver/male child interactions, 13 male caregiver/female child interactions, 44 female caregiver/male child interactions, and 30 female caregiver/female child interactions. Individuals were unaware that they were being observed, and all observations occurred in busy public settings: fast-food restaurant (n=55); park (n=7); store (n=12); church (n=3); bus (n=2); restaurant (n=2); airport (n=2); museum/library (n=4); house (n=1); animal shelter (n=4); and shopping mall (n=8). The observations were done in the morning (n=38), afternoon (n=42), and evening (n=20). Observers were instructed to identify noncompliance events with preschool-aged children, as described below. Several pilot sessions were conducted, during which observers chose locations that would maximize the likelihood of witnessing adult-child conflict in public without being noticed by the observed individuals.

Procedure

Noncompliance episodes. A noncompliance episode was defined as a situation in which the adult caregiver in an adult/child pair expressed verbally and/or physically that he or she was displeased with the behavior of the child and desired a change. Noncompliance episodes chosen for observation contained all of the following: 1) a child who the observers judged to be under the age of 5, based on size, language skill, and behavior—non walking infants were also excluded; 2) one adult caregiver was identified as the parent, based on the criteria described above; 3) a compliance request was made by the adult; 4) child compliance was not immediately forthcoming from the child, thus setting the stage for continued adult intervention. The behavior used by the adult caregiver at the start of an event, which marked the beginning of an event, was not included in the coding of adult caregiver behavioral style. Coders agreed that a noncompliance event was occurring by making eye contact with each other and/or nodding. If one coder signaled the onset of an episode, but the other coder missed the signal, that event was not coded, and the coding team waited for another noncompliance event to occur. Formal reliability for the identification of a noncompliance episode was not calculated because these events were always determined by consensus. Coders were instructed to record data using pen and paper immediately after a noncompliance episode was identified and had concluded. The end of an event was determined by child compliance with the adult caregiver's original request, or at the end of 180 seconds, whichever was longest. Noncompliance episodes consisted mainly of the adult caregivers'

attempts to have children continue eating in an appropriate manner, or to curb behavior such as running out of sight, teasing siblings, pulling things off shelves in stores, and wandering away. Conflicts over safety issues (e.g., going into the street, climbing on high objects) were not subject to coding as discipline events because we felt that caregiver responses would be constrained by the demands of the situation and individual differences in adult caregiver behavior would be obscured. Child tantrums that were the original source of adult disapproval were also not included due to their extreme emotional negativity. A maximum of four interactions were recorded for any group with at least two adults and two children between toddler and kindergarten age. Observers were instructed to code only one noncompliance event per unique caregiver-child pair (i.e., adult-A-with-child-A, adult-A-with-child-B, adult-B-with-child-A, and adult-B-with-child-B). Episodes in which two adults attempted to address child noncompliance at the same time were not coded, nor were situations in which two children were being disciplined at the same time for the same thing, by a single adult. One of the coders in each pair recorded the adult caregivers' behavioral styles, and the presence or absence of positive and negative touch. The second coder in the pair recorded the child's emotional demeanor and children's latency to comply with the adult caregiver's original demand, at the end of the event. If the child did not comply within 180 seconds, 180 seconds was recorded as the latency to comply.

Adult caregiver behavioral style. Baumrind's original descriptions of core parenting styles (Baumrind, 1967, 1978; Crockenberg & Litman, 1990) served as a model for our coding of adult caregiver behavioral styles. The parenting patterns she originally described (authoritarian, authoritative, permissive, ignoring/neglectful) were meant to characterize patterns of behavior over a significant period of time. We modified the traditional definitions for use during live coding to characterize behavioral style in the minutes comprising the noncompliance episode⁴. Those modified definitions ("authoritarian-type," "authoritative-type," or "inconsistent permissive-type") are presented in Table 1. As mentioned earlier, a determination of the category best fitting the behavioral style exhibited by the adult caregiver was made by the coder who had been assigned to this variable. Observers were trained to make these decisions based on manner in which the adult handled the child's noncompliant behavior, paying particular attention to consistency of adult demands, tenor of communication with the child, and attitudes and expectations regarding child behavior, which would be

⁴ The "ignoring/neglectful" behavioral style was not included in this study because this behavior on the part of the adult would preclude a noncompliance event being identified.

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Table 1. *Definition of Adult Caregiver Behavioral Styles*

Authoritative-type

Behavior that is encouraging and respectful, displaying positive emotion except when the child was aggressive or in a dangerous situation. Adult caregiver focuses on child compliance by using explanations and consequences, and follows through with compliance requests.

Authoritarian-type

Behavior that is rigid and inflexible. Adult caregiver is aggressive and disrespectful toward the child, focusing on child compliance by using hostile threats, gestures, and facial expressions. Adult caregiver expects unquestioning compliance and follows through on compliance requests.

Inconsistent Permissive-type

Behavior by adult caregiver indicating that he or she was not consistently enforcing the request for change in behavior that started the discipline event, making no further attempt to enforce the rule, and allowing the child to continue the misbehavior. Adult caregiver states displeasure with child behavior but does not follow through with compliance requests.⁵

key differences in distinguishing among authoritative-type, authoritarian-type, and permissive-type behavior (see Table 1).

Positive and negative touch. Because our coding was live, we used global categories of touch that could be recorded reliably in a naturalistic setting, and focused on positive and negative touch, which is a natural division well-represented in the literature. Positive touch was defined as touching the child in a gentle manner by patting, stroking, holding hands, hugging or kissing, or physically guiding the child's behavior in an encouraging manner. Negative touch included pulling, pushing, hitting or threatening to hit, or physically restraining

⁵For example, a parent might yell at or bargain with a child but then just sit and watch, thus failing to apply a continuous plan of action or consistent strategy regarding the issue of compliance. A caregiver might adopt fragments from other behavioral styles but only enforce them partially, haphazardly, or not at all.

the child in a punishing manner. These categories were designed so that both negative and positive touch could be seen in one noncompliance episode. In actuality, a combination of negative and positive touch occurred in only one noncompliance episode. The absence of touch of any kind during a discipline episode was also noted.

Child demeanor. For adults, the success of a noncompliance episode may be defined not only as actual child compliance, but by the absence of sullen or angry behavior at the end of the compliance episode. In this study, child demeanor was rated on the following 1 to 4 scale: 1 'very happy'; 2 'happy'; 3 'unhappy'; 4 'very unhappy,' in order to assess this part of a compliance episode. Ratings of child demeanor represented a snapshot of the child's emotional state of the point at which the compliance episode was over. Decisions about demeanor codes were based on outward behavior that conveyed emotional state. This included facial expression, body posture, movements, and vocal characteristics. Gradations of happiness and unhappiness were indicated by behaviors in a variety of emotion categories, including smiling, surprise, or positive anticipation (pleasure – "happy"), bouncing, hopping, or other rapid and contained body movement in anticipation of a treat or surprise (pleasure—"very happy"), and frowning, sad, sullen, sulky, or scowling facial expressions (sadness—"unhappy"). Stomping, throwing, kicking, or other aggressive body positions and movements (anger—"very unhappy"), or hunched shoulders and a hanging head, or crying (sadness—"very unhappy") also indicated unhappy demeanor. Physical thrashing, rolling, and flailing associated with a temper tantrum were also considered to be signs of "very unhappy" demeanor⁶. Vocalizations characterized by an angry raised voice, disgruntled muttering (anger), or by crying, whimpering, whining, or melancholy tone of voice (sadness) also indicated unhappiness, based on our definition. Laughing and giggling were vocalizations indicating happiness. A determination of happy versus unhappy was based on the presence of one or more of the behavioral indicators listed above. Level of intensity (e.g., "happy" versus "very happy") was based on the number of behavioral indicators of happiness or unhappiness exhibited by the child and on the observer's impression of the intensity of the emotional behaviors. Observers were trained to recognize these characteristics and rate their intensity consistently prior to data collection during live observation by using videotapes of young children in emotion-eliciting

⁶ Although temper tantrums were excluded as triggers of discipline events, noncompliant behavior might develop into a temper tantrum, without resolution at 180 seconds. The tantrum behavior, in such a case, would form the basis for the rating of child demeanor at the end of the discipline event.

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episodes. See *Data Collection Approach* section below for a description of training to criterion, data collection, and reliability calculation procedures.

Latency to comply. The child's latency to comply with adult caregiver requests was recorded in seconds. Compliance was defined as a clear change in the child's behavior so that it became consistent with the adult caregiver's original request. The period of time for observing a single caregiver-child interaction was limited to 180 seconds. In previous research on compliance demands by mothers with their preschool-age children in the laboratory, we noted that even for children with behavior problems, compliance was nearly always forthcoming within three minutes, and in many cases in a much shorter period of time (Stansbury & Sigman 2000). Coding ended when the child complied, or at the end of 180 seconds, whichever was longer. This meant that even if a tantrum developed after the compliance request by the adult, and subsequently ended prior to the three minute window, but the original request had not been complied with, timing continued until the child did comply, or 180 seconds had passed from the beginning of the event, as with other noncompliance episodes. A binary variable was created afterwards by recording "yes" for all events for which coders recorded a latency of less than 180 seconds, and "no" for all events for which coders recorded 180 seconds. The reliability data indicated that there was 100 percent agreement between partners on whether or not failure to comply, indicated by a latency of 180 seconds, was recorded.

Data Collection Approach

Observers were 17 students in a child research methods class at a large university in the southwest United States. The class was largely focused on the development of observational coding systems for use in laboratory and naturalistic studies of young children and their parents, and laboratory experiences emphasizing the development of competence in a variety of coding systems, issues of reliability and validity, and ecological validity were required as part of the coursework. Thus, the student observers had experience with the mechanics of live coding prior to the start of this project.

Coding was done live, as events occurred; transcripts were not feasible for these public observations. Based on the definition of noncompliance episodes given in the previous section, the pair agreed by prearranged signal that a noncompliance episode was occurring.

Students were assigned to the same two-person teams for training, data collection, and final assessment of reliability. There were seven variables to be assessed on the spot: a) adult gender; b) child gender; c) adult caregiver

behavioral style; d) occurrence/nonoccurrence of adult caregiver positive touch; e) occurrence/nonoccurrence of adult caregiver negative touch; f) child demeanor at the end of compliance episode; and g) child latency to comply in seconds. The recording of these variables was divided between the two members of the coding team. Latency to comply was recorded with a small stopwatch or by the observers' second hands on their wristwatches. Student observers were instructed not to discuss their coding during the observations. Whether or not the child finally complied was scored afterward by examining the latency to comply variable. If latency was recorded as 180 seconds, failure to comply was indicated, because 180 seconds was the maximum time for the observation of each discipline event. In the case the child happened to comply exactly at 180 seconds, student observers made a note so that the compliance variable could be correctly recorded afterward. The location of the observation and the gender of the adult and the child were also recorded by both members of the student team either before or after the discipline event was observed.

Training to criterion, data collection, and final reliability assessment.

During training, both members of the team recorded all seven variables for the same discipline events. While training to criterion, teams were required to practice until they reached 85 percent agreement on each of the seven coded/recorded variables. Student observers were instructed not to discuss their coding during the observations. Once data collection began, on the other hand, each team member recorded only a subset of the variables in order to maximize the accuracy of the data. Student A coded/recorded three variables: adult caregiver behavioral style; occurrence or nonoccurrence of positive touch, and occurrence or nonoccurrence of negative touch. Student B coded/recorded two variables: child demeanor at the end of the discipline episode and latency in seconds to compliance (from the onset of the discipline event to child compliance) for the same event.

We chose this approach to the behavioral coding for several reasons. The use of separate students to record the information that represented the independent and dependent variables allowed us to avoid the confound that would have been created if a single coder provided data for both variables. Additionally, in order to increase the accuracy of the behavioral coding, each student recorded/coded no more than three variables during the discipline event.

Final evaluations of reliability were calculated on a separate set of 40 noncompliance events observed by eight pairs of coders at the end of the study, each observing and coding both adult and child variables for five noncompliance events. These 40 noncompliance events were not included in the final dataset. For the three adult caregiver behavioral styles, $k = .61$, which is considered acceptable

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according to Cohen (1968). Kappa was 1.00 for both presence/absence of positive touch, and presence/absence of negative touch. The correlation coefficient for measurement of latency to comply was $r(38) = .95, p < .0004$. The correlation coefficient for measurement of child demeanor was $r(38) = .84, p = .0004$. These numbers indicate that observers were reliable in their recording of adult caregiver behavior, children's latency to comply, and child demeanor, and that there was also a high degree of agreement on what constituted compliance. Ideally, reliability would have been assessed both within and across observer pairs. The original plan for data collection, however, in which students in an observational methodology course collected the data, did not make such a protocol feasible at the time the study was done.

Location and Time of Day. The effects of location and time of day on our main variables (child latency to comply, child demeanor, and adult caregiver behavioral styles) were tested with separate analyses of variance (ANOVAs). Location of episode and time of day had no significant effect on any of the variables, with F s ranging from .67 to 1.83. Chi-square tests were conducted to determine whether there were differences in the use of positive or negative touch or adult caregiver behavioral style by time of day or location. Positive touch, negative touch, and adult caregiver behavioral style were not related to location or time of day. χ^2 s ranged from 1.13 to 8.56, all non-significant at the .05 level.

Results

Presence of Touch

Children were touched in a negative manner in 24 of 106 noncompliance episodes (23 percent) and were touched in a positive manner in 35 of 106 episodes (33 percent). In only one case was the child exposed to both positive and negative touch, and that episode was removed from the dataset. In the remaining episodes, no touch of any kind was observed, (40 of 106; 38 percent). Male adult caregivers were more likely than female adult caregivers to use some kind of touch, $\chi^2(1) = 4.96, p = .026$. When male caregivers did touch the child during the discipline episode, it was more likely to be positive than negative. Female caregivers were just as likely to touch as not to touch the child (either positive or negative) during the noncompliance episode, $\chi^2(2) = 5.82, ns$. Boys and girls were equally likely to receive some type of touch, $\chi^2(1) = .001, ns$, but if they were touched, boys were more likely than girls to receive a negative touch, $\chi^2(1) = 5.001, p = .025$. When examining male and female adult caregivers' use of touch in conjunction with child gender, our data indicated that male caregivers' use of touch did not differ according to the gender of the child, $\chi^2(2) = .21, ns$. Female

caregivers, on the other hand, were more likely to use negative touch with boys, and more likely to use positive touch with girls, $\chi^2(2) = 10.84, p = .004$. Please see the complete patterns in Table 2.

Adult Caregiver Behavioral Style

In our sample, 26 percent of the noncompliance episodes were coded as authoritarian-type, 36 percent as permissive-type, and 39 percent as authoritative-type. Patterns of use of the three behavioral styles were not significantly different

Table 2. *Patterns of Association Between Adult Caregiver and Child Gender and Use of Positive or Negative Touch.*

Child Gender	Caregiver Gender	Type of Touch			
		Positive	Negative	No Touch	Total
Boys					
	Male Caregiver	9	4	4	17
	Female Caregiver	7	14	18	39
	Total	16	15	22	56
Girls					
	Male Caregiver	6	4	3	13
	Female Caregiver	14	2	14	30
	Total	20	6	17	43

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for men and women, $\chi^2(2) = 1.78$, *ns*. The same was true for male and female children, who did not appear to elicit different proportions of the three patterns of adult caregiver behavioral style, $\chi^2(2) = 4.06$, *ns*. When examining adult and child gender in combination with adult caregiver behavioral style, no differences were seen for male caregivers for boys and girls, $\chi^2(2) = .68$, *ns*. For female caregivers, a trend toward different treatment for boys and girls emerged, $\chi^2(2) = 5.46$, $p = .07$. Female caregivers were somewhat more likely to use permissive-type behavior with girls, and authoritarian-type or authoritative-type with boys.

Touch and Adult Caregiver Behavioral Style

In order to determine the association of adult caregiver behavioral style with type of touch, another chi-square test was conducted. Authoritarian-type behavior was most frequently combined with negative touch, permissive-type was most seen in conjunction with no touch, and authoritative-type occurred most frequently with positive touch, $\chi^2(4) = 34.80$, $p = .000$. While this pattern is significant, however, the presence and type of touch did not completely overlap with adult caregiver behavioral style. When authoritarian-type adult caregiver behavior was seen, for example, 11 out of the 25 cases were not combined with negative touch. For permissive-type behavior, 16 of 37 cases were associated with positive or negative touch, and for authoritative-type adult caregiver behavior, 13 out of 37 cases did not contain positive touch.

Immediate Child Responses

Having established the patterns of relationships between potential causal variables, child and adult gender, adult caregiver behavioral style, and type of touch, we wished to determine the relation of those patterns to child responses (latency to comply, demeanor) in noncompliance episodes. We conducted two 4-way analyses of variance (ANOVAs), with four variables as factors (adult caregiver behavioral style, adult gender, child gender, touch), and child demeanor and child latency to comply as separate dependent variables. Means and standard deviations for these ANOVAs can be seen in Table 3. For child demeanor, there were two significant interaction effects. Negative touch was associated with significantly worse child demeanor when used with female children, $F(2,91) = 3.05$, $p = .05$, and permissive-type behavior on the part of the adult caregiver was

Table 3. *Child Demeanor and Child Latency to Comply by Adult Caregiver and Child Gender, Caregiver Behavioral Style, and Touch.*⁷

<i>Adult Gender</i>	Child Demeanor					
	<i>Touch</i>					
	<i>Positive</i>		<i>Negative</i>		<i>No Touch</i>	
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Adult caregiver behavioral style						
Authoritarian-type						
Girls	na	3.7(.6)	4.0(.0)	4.0(na)	na	na
Boys	na	na	4.0(.0)	3.1(.7)	3.0(na)	3.3(1.0)
Permissive-type						
Girls	4.0(na)	2.0(1.0)	3.5(.7)	3.0(na)	3.0(na)	1.9(.6)
Boys	2.0(.0)	1.0(na)	na	2.4(.6)	2.0(.0)	2.2(.5)
Authoritative-type						
Girls	1.8(.8)	2.7(1.0)	na	na	2.0(.0)	Na
Boys	2.3(.5)	2.4(.6)	na	2.0(.0)	3.0(na)	2.5(.5)

(table continues)

⁷ Means are shown with standard deviations in parentheses immediately following the mean; "na" represents an empty cell – no observations were made for that cell; "na" in place of the standard deviation indicates *n* in that cell was 1. Child demeanor was measured on a scale of 1 (very happy) to 4 (very unhappy). Latency to comply was measured in seconds.

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Table 3 (continued). *Child Demeanor and Child Latency to Comply by Adult Caregiver and Child Gender, Caregiver Behavioral Style, and Touch.*

		Latency to Comply					
		<i>Touch</i>					
		<i>Positive</i>		<i>Negative</i>		<i>No Touch</i>	
<i>Adult Gender</i>		<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>
Adult caregiver behavioral style							
Authoritarian-type							
Girls		na	47(26)	180(na)	23(na)	na	na
Boys		na	na	94(69)	27(20)	31(na)	81(72)
Permissive-type							
Girls		33(na)	101(79)	95(42)	180(na)	180(na)	97(71)
Boys		56(55)	7(na)	na	78(75)	105(106)	48(74)
Authoritative-type							
Girls		32(34)	79(68)	na	na	31(16)	na
Boys		39(56)	45(37)	na	78(60)	20(na)	64(49)

associated with significantly better demeanor for girls than for boys, $F(2,91) = 3.56$, $p = .05$. There was also a significant main effect of adult caregiver behavioral style on child demeanor, $F(2,91) = 6.66$, $p = .002$, such that authoritarian-type behavior was associated with significantly worse child demeanor at the end of the noncompliance event. All other F s were not significant.

For child latency to comply, the second 4-way ANOVA indicated a trend toward a main effect of child gender, $F(1,89) = 3.11$, $p = .08$, in which boys complied slightly more quickly than girls did. All other F s were not significant. Finally, there was a moderate relationship between child demeanor and latency to comply, $r(97) = .22$, $p = .04$, which indicated that children who were happier at the end of the noncompliance event were also faster to comply. See means and standard deviations in Table 3.

Discussion

The results of the present naturalistic study of adult-child interactions in public settings provide a unique window into the processes involved in disciplinary events with young children. This information is largely absent from the literature because most methodological approaches - laboratory, survey, or interview - occur with participants being aware that they are being studied. As such, our findings may provide a more realistic picture of the ways in which young children are typically socialized. Surprisingly, almost a quarter of children received some kind of negative touch (e.g., slap, pinch, arm pulling, etc.) during the noncompliance events we observed. In this sample, negative touch was not associated with children's latency to comply with adult requests, but was associated with unhappier demeanor for girls, but not for boys, at the end of the compliance episode. This effect was the same whether the adult caregiver was male or female. Additionally, when male caregivers used touch in noncompliance episodes, it was more likely to be positive than negative. This was unexpected, given the bulk of the literature from self-report (McElwain, Halberstadt, & Volling, 2007), adult and child report (Klein et al., 1996; Sunday et al., 2008), and laboratory studies, most of which have depicted fathers either as less emotional, less supportive, less involved (Finley, Mira, & Schwartz, 2008; Tikotzky et al., 2011), providing less praise (e.g., Robinson & Eyberg, 1981), or less nurturing with their young children (Russell, Hart, Robinson, & Olsen, 2003) than mothers.

Positive and Negative Touch

In this study, the effect of negative touch on children's demeanor at the end of the episode depended on the child's gender. Girls who were touched in a negative manner in the noncompliance episode showed significantly worse demeanor after they complied with the adult request or demand than did boys. This finding on the connection between proximal parenting behavior (e.g., negative touch) and proximal child responses (e.g., emotional demeanor at the end of a noncompliance episode) is inconsistent with much of the existing research on long term outcomes. Typically, research suggests that boys have more negative responses to physical discipline than do girls (e.g., Grogan-Kaylor, 2005). The difference in effects for boys and girls in our study may be due to a lack of experience with and consequent novelty of negative touch for girls. We did not target a clinical sample, which many laboratory and intervention studies have done – this might account for the gender differences in response to negative touch here. Further, the connection, for girls, between negative demeanor and negative touch, might reflect more intense noncompliance episodes that evoked the negative touch behavior from parents. A very upset and “out-of-control” girl might represent an extreme situation in which negative touch with girls was warranted, in the minds of adult caregivers. Boys, who may have had more experience with negative touch, according to a number of studies, did not show unhappier demeanor when touched in a negative manner based on our observations.

To conceptualize the effects of negative touch on child demeanor, it may be necessary to distinguish between spanking (open-handed blow to the buttocks intended as discipline; Friedman & Schonberg, 1996), which is thought of by some as part of a coherent, consistent disciplinary style, and more mean-spirited kinds of negative touch, that might be specifically intended to hurt or shame the child (Friedman & Schonberg, 1996), such as slapping, hair-pulling, pinching, ear-twisting, or yanking by the arm. Although the criteria for defining abuse differs by community and jurisdiction, both the short and long term effects of the different types of negative touch we observed would be likely to vary according to the psychological or cultural experiences of the participants. Maternal factors such as warmth and emotional support, and the child's perception of the legitimacy of adult discipline, may moderate the effects of some types of negative touch on behavioral and psychological outcomes (Baumrind, 1996). Deater-Deckard and colleagues, for example, reported that harsh physical discipline was correlated with child externalizing problems, but only among the subset of children who had lower levels of parenting warmth (Deater-Deckard & Dodge,

1997; Deater-Deckard, Ivy, & Petrill, 2006. Further, McLoyd and Smith (2002) showed that maternal emotional support moderated the negative effects of spanking on children's problem behaviors. The meaning of spanking to the child is also based on the cultural normativeness of physical discipline, which may moderate the long term negative effects of this discipline strategy among different cultural groups (Lansford et al., 2005). Understanding the role of cultural norms, and the perceived legitimacy of negative touch on both short and long term effects of harsh touch will also be important if we wish to understand problems of aggression that may appear in adolescence, but have their roots in patterns of early parenting. Early patterns of coercive parental behavior, such as that employed to achieve compliance, may create expectations about the reinforcement characteristics of relationships that will later be generalized to peers (Dishion, Patterson, Stoolmiller, & Skinner, 1991), authority figures (Lansford et al., 2002), and dating partners (Miller, McCoy, Olson, & Wallace, 1986). Additionally, the effects of permissive, authoritarian, and authoritative behavior by adults toward children occur whether the adults frequently involved with them are parents, teachers (Wentzel, 2002), or childcare providers (Arnold, McWilliams, & Arnold, 1998).

Immediate Child Responses

In this study, latency to comply was not related to adult or child gender, or to adult caregiver behavioral style or type of touch received during the discipline event. The speed of onset of compliance behavior may be related to the presence and characteristics of contingent reinforcers, negative or positive, which had acquired their meaning during the history of the relationship with the adult caregiver (Parke & Walters, 1967), and would then be unconnected to behavioral style, touch, or gender. This scenario would be consistent with the principles of reinforcement (Windholz, 1989), and might include verbal reminders of the intensity of previous punishments, exhibition of angry facial expressions by the adult caregivers, the removal of which would function as negative reinforcers, or could be positive reinforcers in the environment such as other children laughing and showing enthusiasm for a particular misbehavior.

On the other hand, it is unclear whether faster compliance times are really the optimal measure of early socialization. It has been noted by some that excessive child compliance may reflect dysfunctional family relationships (e.g., Crittenden, 1988). The alternative view, which suggests that child non-compliance as a positive function in child development and may actually represent emotional regulatory processes (Campos, Campos, & Barrett, 1989; Stansbury & Sigman,

2000) is supported by recent studies (Kuczynski & Kochanska, 1995; Kuczynski, Kochanska, Radke-Yarrow, & Girnius Brown, 1987; Power, McGrath, Hughes, & Manire, 1994).

Results of these studies suggest that better parenting could be associated with longer child latencies and noncompliance might be better viewed in a functional manner. However, the principles of reinforcement provide another explanation for compliance rates. According to this theory, children get punishment for their noncompliant behavior and contingent positive reinforcement for their compliance. Therefore, children obey their parents because of reward for their compliance or to avoid punishment for noncompliance (Parpal & Maccoby, 1985). According to Patterson, DeBaryshe, and Ramsey (1989), children's noncompliance rate is increased by inconsistent use of positive reinforcement for compliance and punishment for deviant behavior and this ineffective parenting reinforces children's coercive behaviors and is associated with the development of antisocial behavior as well. Additionally, Latham's work has emphasized the role that operant conditioning plays in both increasing maladaptive or harsh parental behavior, and in maintaining positive child behavior through a history of positive reinforcement (Latham, 1994). This is an important point, because adult caregivers whose typical behavioral style consists of positive reinforcement to maintain good child behavior would have been less likely, in our study, to be identified for data collection when our coders were scanning for noncompliance events, suggesting that the links between parent and child behavior described here do not encompass the full range of parent behavior and child outcomes.

Better child demeanor at the end of the noncompliance episode was associated with shorter latencies to comply. This fits nicely into the model suggested by Kochanska (1997) in which shared positive affect – positive affect in both the parent and child - was a necessary context in which socialization of behavior could occur. Other research has supported this idea (e.g., Lay, Waters, & Park, 1989). In future studies, we suggest that researchers explore the changes in children's emotional states throughout the noncompliance event to evaluate their function both as responses to discipline and as causal agents in the immediate reactions of their parents.

Child gender (presumed biological sex) was not associated with either child demeanor or child latency to comply. We did, however, find that boys received more negative touch from adults than did girls. This is consistent with most research in this area, which indicates that boys are spanked more frequently than girls (Day, Peterson, & McCracken, 1998; Giles-Sims, Straus, & Sugarman, 1995; Smith & Brooks-Gunn, 1997; Straus & Stewart, 1999), although not all studies show gender differences in this area (Holden, Coleman, & Schmidt, 1995; Lytton

& Romney, 1991; Regalado, Sareen, Inkelas, Wissow, & Halfon, 2004). Further, some have argued that differences in physical punishment of girls versus boys may not appear until later in development (Holden et al., 1995), or if differences are found, they may occur in the context of other factors, such as race (MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011).

Finally, it should be remembered that the present study included not only spanking but all forms of negative touch, which is not true of many of the studies cited above, and this suggests some additional caution about comparisons. Moreover, we wished the participants in our study to remain unaware that they were being observed, and thus were not able to collect accurate age data for each child that would have allowed us to determine whether or not the gender difference in touch was specific to the older children in the sample. Although not related to gender, other studies do report age effects for compliance. In the present study, we did not examine possible alternative explanations for child compliance and demeanor because we were limited by the constraints of naturalistic observation. However, future designs could be adapted to include analyses of child-specific variables as possible contributors to children's immediate responses to discipline, and this would enrich our understanding of the developmental processes at work in the socialization of these behaviors.

Limitations

While the findings from this study are provocative and potentially instructive, they should be considered preliminary in nature, and as a first approximation to a substantive understanding of the role of adult behavior in child disciplinary outcomes in a natural context. The data emerged from a pedagogical experience designed for students, and although simple measures of interobserver reliability indicated adequate reliability for the coding systems involved, additional controls on reliability (e.g., training to 90 percent agreement as criterion, collecting a larger sample of reliability data across observers, midpoint reliability checks), which would have been part of a larger design, were not included here.

The technology now available, such as handheld palm computers for coding, which can be synced to connect the observations of two coders at the same point in time, and pinhole cameras, which can record images of behavior unobtrusively (as appropriate, given issues of privacy and anonymity of data), should allow a thorough, rigorous, and reliable investigation of these phenomena as they naturally occur. While bringing a great deal of ecological validity to an examination of the phenomena in question, a design depending upon naturalistic observations gives up the control of the laboratory, and thus we must be quite

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cautious in generalizing these results. It will be important to replicate and expand this study, perhaps using electronic recording techniques now available, and to include laboratory observations of similar behavioral episodes, to explore the effects of adult parenting type and touch on child discipline outcomes in a more controlled setting.

Conclusions

These findings document real-world use of touch and different adult caregiver behavioral styles by men and women with young children in noncompliance events. Results here are not completely consistent with many studies of physical discipline and child compliance. Extant data derive mostly from reactive self-report or laboratory observation methods that are subject to social desirability effects. Our data, obtained through discrete but methodologically rigorous observations in public settings, highlight the importance of male caregivers in providing positive touch to the young children of whom they are making compliance requests, and the differences in the way that boys and girls respond to positive and negative touch in discipline episodes.

We have provided evidence that previously established links between parent behavior and child responses to discipline may reliably be studied in moment-by-moment naturalistic observations. Additionally, although studies of discipline styles have typically focused on adult caregiver behavioral style and long-term child outcomes, the current findings point to the value of studying immediate child responses to adult caregiver behavior as well.

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