CHAPTER 12
Retrospective Methods in Developmental Science

ANDREA FOLLMER GREENHOOT

Central Issues

How accurately can individuals report their own or others' past characteristics, feelings, behaviors, and experiences? Retrospective methods for measuring these types of variables are not unusual in the empirical literature, and they may present a particularly attractive solution to some of the design challenges inherent in developmental science. Developmental investigations are often designed to examine patterns of change and stability in individuals over time, but it is expensive and time-consuming to wait for development to happen, and prospective longitudinal methods may be especially impractical for investigating the antecedents or origins of infrequent and atypical developmental outcomes. Methods that rely on participants' recall of traits, behaviors, internal states, or experiences at earlier ages permit researchers to circumvent the complexities of assessing individuals at two or more time points often separated by years. Nevertheless, it is well established that human remembering is imperfect and that we are prone to forgetting, distortions, and illusions, particularly as the delay between an event and its later recollection increases. Therefore, the goals of this chapter are (1) to review the common uses of retrospective methods in developmental science and (2) to evaluate the reliability of these methods for addressing developmental questions from the perspective of the literatures on memory and memory development.

Conceptual Principles

Self-, parent, and other (e.g., teacher) report methods are quite common in the literature on human development and are used to assess all sorts of constructs. The limitations of such methods, particularly the tendency to respond to researchers' questions in socially desirable ways and the influence of demand characteristics, have been studied extensively (e.g.,
Crowne & Marlowe, 1964). In spite of these limitations, self-report methods are quite well accepted in the psychological research literature, particularly if they are combined with other methods that provide convergent measurement. But new sources of error and bias are introduced when the reports are retrospective in nature. Retrospective report methods ask participants to reflect, recall, and report on traits, behaviors, internal states, experiences, and other variables of interest after some delay. Technically, even reports of past states, behaviors, or experiences after very short delays (i.e., days or weeks rather than years) involve memory, but the role of memory processes in what is reported becomes increasingly important with the passage of time. By definition, then, memory is central to retrospective methodology and is the single feature that discriminates retrospective report methods from basic self-report methods. Thus any evaluation of the validity of data collected with retrospective methods requires an analysis of research on memory and memory development, with a special emphasis on the factors that are likely to influence the reliability of reports of past traits, behaviors, internal states, and experiences from previous periods of development. The analysis provided here begins with an overview of basic memory principles, followed by a treatment of the memory research relevant to the most common applications of retrospective methods in developmental science.

**Basic Principles of Remembering**

In order to provide an accurate retrospective report, an individual has to encode information about the phenomenon of interest (i.e., the behavior, experience, or characteristic), preserve the resulting memory representation over a delay, and eventually retrieve and report it. According to the memory literature, however, maintaining the accuracy of these processing steps is not a simple and straightforward matter. Indeed, since Bartlett’s seminal research (1932), psychologists have known that human remembering is not a simple reproductive process that stores memories in a verbatim or photographic form but rather is an active, constructive process that is vulnerable to errors and knowledge-driven distortions. Memory encoding is thought of as a process of construction, as individuals use background knowledge, attitudes, and beliefs to interpret and elaborate on to-be-remembered information. The resulting memory representations are conceptualized by current models as dynamic patterns of features that are activated and bound together during the encoding process (e.g., Conway & Pleydell-Pearce, 2000; Schacter, Norman, & Koustaal, 1998).

Memory retrieval is seen as a similar process of reconstruction that involves the reactivation of component features and pattern completion, again guided by current knowledge, attitudes, and beliefs. Expectations that are provided by knowledge about familiar events, people, or objects may be translated into retrieval cues, resulting in superior recall of knowledge-relevant, as opposed to knowledge-irrelevant, information (Brewer & Nakamura, 1984). But a critical feature of this reconstructive retrieval process is that the “memory” that gets retrieved and reported can be dramatically influenced, changed, and reorganized by a number of factors, including the simple passage of time; relevant knowledge, attitudes, and beliefs; exposure to intervening experiences; and the social and physical context of remembering. For instance, individuals may incorrectly activate features that are consistent with knowledge but are not a part of the to-be-remembered event, resulting in errors in recall (Greenhoot, 2000; Ornstein et al., 1998). Furthermore, it is well established that events that occur during the delay interval between an event and its later recall, such as related experiences or exposure to another person’s account, may be confused with a target
event during retrieval, leading to recall distortions (Bruck & Ceci, 1999; Johnson, Hashtroudi, & Lindsay, 1993). Memory errors, moreover, are more likely to occur as the delay interval between initial encoding and retrieval increases, as memory representations decay and become more difficult to reconstruct over time (Myles-Worsley, Cromer, & Dodd, 1986; Ornstein et al., 1998). Finally, characteristics of the retrieval context are known to affect remembering. Remembering is generally enhanced by recall conditions (e.g., one’s physical surroundings or mental state) that resemble those that were in place when an event occurred (Golden & Baddeley, 1975; Tuving & Thompson, 1973), and the social context can also alter the likelihood of retrieving and reporting information (e.g., Davis & Bottoms, 2002; McCloskey & Zaragoza, 1985; Roediger, Meade, & Bergman, 2001).

Most retrospective reporting is likely to rely on a particular form of memory called autobiographical memory, which consists of our memories for our own personal histories, including personally experienced events and general “facts” and knowledge about ourselves. Theories of autobiographical memory argue that it serves several functions besides memory per se (e.g., Conway & Pleydell-Pearce, 2000; Nelson & Fivush, 2004). Specifically, autobiographical memory contributes to our self-concepts, our relationships and sense of shared history with others, and emotion regulation processes and affective experience. It turns out, however, that these autobiographical memory functions can also shape and bias the recall of personal memories in some systematic ways; some recall distortions serve to enhance views and presentations of the present self, and others cause people to perceive the experiences of their lives as more pleasant than unpleasant (e.g., Ross, 1989; Walker, Skowronski, & Thompson, 2003; Wilson, Gunn, & Ross, 2009; Wilson & Ross, 2003).

In sum, basic principles from the theoretical and empirical literatures on memory suggest that recall is fallible and that previous states, traits, and behaviors can be forgotten and altered in memory via a range of factors, particularly as the delay interval between the to-be-remembered event and the report of it increases. The types and severity of errors and distortions depend on a number of variables, including the characteristics of the individual doing the reporting, the identity of the individual being reported on (self versus other), individual and developmental differences in relevant knowledge, attitudes, and beliefs, and the context of the reporting.

**Developmental Applications**

The most common applications of retrospective methods in developmental science fall into three broad categories: (1) adults’ (e.g., parents’ and teachers’) reports of children’s past states, traits, behaviors, and experiences, (2) adults’ reports on their own pasts, and (3) children’s reports of their own pasts. The sections that follow provide a treatment of the research relevant to evaluating the validity of each of these three developmental applications.

**Adult Reports on Children’s Pasts**

Adult retrospective reports have been used in the recent developmental literature to gather information about children’s early life circumstances, personality and physical characteristics, and achievement of developmental milestones (Germo, Goldberg, & Keller, 2009; Roizen et al., 2007). One of the most common uses of this method is to identify the antecedents
or origins of atypical, infrequent developmental patterns that emerge during childhood, such as a diagnosis of a childhood disorder, delinquent or violent behavior, or peer rejection (e.g., Herrenkohl, Huang, Tajima, & Whitney, 2003; Pierce, Vinokur, & Buck, 1998; Rork & Morris, 2009; Sandstrom & Coie, 1999) or to measure antecedent variables prior to an unexpected event such as a parent’s military deployment (OConnor, Bredenkamp, & Rutter, 1999). Because the population of interest is defined by an uncommon or unexpected outcome, prospective longitudinal work would require tracking a large enough sample so as to include enough positive cases for predictive analyses. Such work tends to be time-consuming, costly, and impractical, and researchers who lack sufficient resources sometimes turn to retrospective reports from parents of children in the population of interest (or from other adults in the child’s life) to gather information about their previous behaviors and experiences.

Although there are many practical reasons for the adoption of these methods, parent retrospective reports have raised concern since the 1960s, when a flurry of studies cast doubt on their accuracy (e.g., Brekstad 1966; Haggard, Brekstad, & Skard, 1960; Wenar & Coulter, 1962; Yarrow, Campbell, & Burton, 1970). In the most comprehensive of these studies, Yarrow and colleagues (1970) compared parents’ retrospective reports with baseline measures of their children’s characteristics collected 3–30 years previously and found only very small (albeit significant) correlations between parents’ retrospective reports and the baseline data. However, the overlap between the two types of measures tended to be higher when there were shorter delays between the baseline and the retrospective report (Yarrow et al., 1970) and when the reports focused on physical traits, such as height and weight, rather than behavioral and personality characteristics, such as manageability (Burton, 1970).

None of these findings is all that surprising when one considers basic, well-established principles of remembering. First and foremost, as is the case with any parent or teacher report measure, parents can accurately report on only those behaviors and experiences that were encoded and stored in memory in the first place. But even those phenomena that are encoded may be forgotten or misremembered after a delay or in response to intervening events. For example, parents may misattribute events that happen during the delay interval, including changes in children’s behaviors and characteristics, to the target time period. Research on memory dating shows that adults are often inaccurate in estimating the timing of previous events (e.g., Thompson, Skowronski, Larsen, & Betz, 1996), and an extensive literature on source monitoring demonstrates that confusion about the sources of information can lead to recall distortions, particularly after long delays (e.g., Johnson et al., 1993).

An additional source of error in parents’ reports of their child’s past attributes is their current “knowledge,” including attitudes and beliefs, about the child. Not only does current knowledge guide the way people retrieve memories, but also individuals may reinterpret, add, or omit information such that what is eventually recalled is consistent with current understandings (Anderson & Pichert, 1978; Ross, 1989; Snyder & Uranowitz, 1978; Spiro, 1977; Wilson & Ross, 2003). Investigations of the accuracy of parent retrospective reports have found that many reporting errors appear to be biased in the direction of desirability, precocity, and fewer difficulties; in other words, parents generally remember their children’s attributes more positively than originally reported in the baseline documentation, especially when the delay interval is quite long (e.g., Yarrow et al., 1970). Furthermore, there is evidence that when adults’ impressions of another person change over time, they modify their recall of that person’s behaviors and characteristics in ways that are consistent
with newly acquired views (Snyder & Uranowitz, 1978; Spiro, 1977). All the same, sometimes our knowledge may bias us to perceive and report changes rather than consistency over time, through the operation of implicit theories of personal change. Such implicit theories include general beliefs about development and the conditions that produce stability and change in personal characteristics (e.g., "Adolescents are far more idealistic than adults"), as well as more specific personal beliefs about oneself (e.g., "I was much less confident when I was 15 than I am now"), and such beliefs can bias the way previous attributes are recalled. For instance, when people possess theories of improvement, they systematically distort their memories of the past by exaggerating the inferiority of their past attributes (e.g., Ross, 1989). Although research on implicit theories has focused on theories of the self, a logical extension is that adults’ intuitive theories about children's development may similarly influence the way they retrospectively report their children's characteristics.

In sum, the memory literature highlights the potential hazards of relying on parents’ retrospective reports of their children's attributes or experiences as objective measures of the constructs they are intended to measure. Nevertheless, most retrospective reports are at least minimally associated with baseline measurements, and the methodology may be most appropriately used in contexts that involve short delays and that ask parents to report on phenomena that are unlikely to evoke strong beliefs, attitudes, or implicit theories about their children's developmental trajectories.

**Adult Reports on Their Own Pasts**

Researchers sometimes ask adults to report on their own past states, traits, behaviors, and experiences to gather information about past parenting behaviors and other family variables. For example, 7–17 months following 9/11, Mowder, Gutman, Rubinson, and Sossin (2006) asked parents who worked near Ground Zero to recollect their parenting behaviors and beliefs prior to and immediately after 9/11. Their reports suggested that there had been shifts in their parenting perceptions immediately after 9/11, but they returned to baseline over time. Adult reports of their own childhoods, like adult reports of their children's behaviors, are often used to investigate the predictors of relatively uncommon outcomes, such as violent behavior, incarceration, substance abuse, disease, and psychopathology in adulthood (e.g., Henry, Moffitt, Caspi, Langley, & Silva, 1994; Manuzza, Klein, Klein, Bressler, & Shrout, 2002; Sudman & Bradburn, 1973; Widom, Weiler, & Cottler, 1999). In fact, some adult diagnoses, such as adult attention-deficit/hyperactivity disorder (ADHD), actually require a positive retrospective diagnosis of childhood ADHD (American Psychiatric Association, 2000).

Many of the memory principles that apply to the previous category of retrospective reports also apply to this category, but there are also some important dissimilarities. First, it is well established that memory is more accurate and complete for phenomena that are directly experienced than for those that are only witnessed (e.g., Engelkamp & Dehn, 2000; Greenhout, McCloskey, & Glisky, 2005), and for this reason adults could be more accurate in reporting on their own past states, traits, and behaviors than on those of their children. Nevertheless, the mnemonic benefits of direct experience may be dwarfed by the impact of the dramatic cognitive changes that take place across childhood and adolescence. As mentioned previously, there is ample empirical evidence that we retrieve, reinterpret, and reorganize old memories in light of our current knowledge and perspectives (e.g., Anderson & Pitchert, 1978; Greenhout, 2000; Ross, 1989; Snyder & Uranowitz, 1978; Spiro, 1977;
Wilson & Ross, 2003), and these findings raise questions about how an adult trying to remember the distant past can escape from his or her current state of knowledge. What's more, our knowledge about the self often includes intuitive theories about how we used to be and how we have come to be our current selves, and these beliefs also have implications for what is remembered (Ross, 1989). For example, Conway and Ross (1984) found that participants in a study skills program overestimated their improvement (and, consequently, the effectiveness of the program) by exaggerating how poor their skills had been prior to the program. Moreover, 6 months later, when asked to recall the grades they had received just after the program, participants reported better grades than they had actually obtained. In fact, the program did not significantly affect the participants' grades at all.

Reports of one's own past may also be affected by autobiographical memory biases related to self-enhancement and emotion regulation functions. Many intuitive theories, for instance, serve to maintain or enhance positive views of the self. In this regard, Wilson and Ross (2003) have shown that people tend to evaluate their past selves more negatively than their current selves, particularly when the attribute in question is important to them, although these patterns may be moderated by factors such as self-esteem and depression. Furthermore, the literatures on memory for unpleasant events and on coping and emotion regulation suggest that adults' recall of past experiences may be altered by their attempts to regulate emotion (e.g., Compas, Connor-Smith, Stoltzman, Harding Thomsen, & Wadsworth, 2001; John & Gross, 2004; Walker, Skowrons, & Thompson, 2003). Coping strategies such as cognitive restructuring and reappraisal involve transforming one's view of an event; if this processing is carried out after an event has unfolded, it by definition involves restructuring a recollection so as to reduce distress.

Consistent with this litany of potential retrospective biases, research on the validity of adults' reports of their childhood histories suggests that the accuracy of such reports is questionable. Some evidence comes from a study by Widom, Weiler, and Cottler (1999) on the relation between adult substance abuse and prospective and retrospective measures of childhood victimization. Analyses using retrospective reports replicated the findings of previous retrospective studies that abused individuals are at increased risk for substance abuse, whereas analyses using prospective reports found no increase in risk associated with victimization. One explanation for the robust findings with retrospective measures is that current involvement in problem behavior influences participants' ability and willingness to recollect difficult childhood experiences; in other words, accurate retrospective reporting of childhood victimization may well differ for individuals with and without current substance abuse problems.

Research on adult ADHD provides additional evidence for retrospective biases in childhood reports. Manuzza and colleagues (2002) compared prospective and retrospective reports of childhood ADHD symptoms in a sample of adults with and without a positive history; almost all of the adults with a childhood diagnosis were identified by their retrospective reports, yet only 27% of those "diagnosed" through retrospective reports actually had childhood ADHD. This pattern suggests that participants' reports of their childhood behaviors and characteristics may have been guided (and distorted) by general beliefs about childhood and development. Additionally, adults have been shown to "bring forward in memory" the temporal distance of the age of onset of childhood and adolescent behaviors such as smoking and substance use; in other words, people tend to report the onset of such behaviors as taking place at older ages than those at which they actually occurred (e.g., Sudman & Bradburn, 1973). Thus, although retrospective reports may provide important
information about adults’ perspectives on their past, these measures do not appear to be objective measures of past states, traits, and behaviors.

**Children’s Reports on Their Own Pasts**

Retrospective reports by children and adolescents about their own pasts are less common than parent or adult reports, but they have been used in the recent literature to collect data on a wide range of variables, including children’s past interactions with parents (e.g., Calam, Waller, Cox, & Slade, 1997), experiences with abuse (Herrenkohl et al., 2003), peer relationships (e.g., Sandstrom & Coie, 1999; Vernberg, Greenhoot, & Biggs, 2006), the onset of deviant behavior or substance use (Nurco, Blatchley, Hanlon, & O’Grady, 1999), and pretrauma experiences and characteristics (Pfefferbaum et al., 1999). For example, in an evaluation of middle and high school students exposed to the Oklahoma City bombing 7 weeks after the event, Pfefferbaum and colleagues (1999) found that retrospective reports of their initial responses to the explosion predicted their posttraumatic stress levels at 7 weeks.

For obvious reasons, the delays involved in this category of retrospective reports are shorter than the delays involved when adults report on childhood, but because the reporters are necessarily younger at the time of retrieval, some of the errors and difficulties observed with adult retrospective self-reports are magnified in children’s and adolescents’ retrospective self-reports. The literature on memory development has yielded substantial evidence of age-related improvements in children’s abilities to encode, maintain, and retrieve memories (e.g., Baker-Ward, Ornstein, Gordon, Larus, & Clubb, 1993; Brainerd, Kingma, & Howe, 1985); the younger the child, the weaker the memory representation, and the more vulnerable the memory will be to forgetting and to influences from knowledge and intervening events.

The few studies that have examined the validity of children’s or adolescents’ retrospective reports suggest that they are prone to errors. For instance, Capaldi (1996) compared adolescent boys’ recall of their first sexual intercourse with prospective measures marking the same event. Although the boys were highly consistent over time in reporting whether or not they had had intercourse, they were quite inaccurate in reporting the date or age of the experience. Yarrow and colleagues’ (1970) study of children’s recollections of their physical and behavioral characteristics as preschoolers found that their reports were more similar to their mothers’ retrospective reports (described earlier) than they were to the baseline records. Thus the children’s recollections may have been influenced by factors such as discussions and family stories that were shaped by the mothers over the delay interval.

Nonetheless, it should also be pointed out that there are some adult memory biases that are unlikely to afflict children. Emotion regulation functions, for instance, are still developing across childhood (Brenner & Salovey, 1997; Compas et al., 2001). Furthermore, because the development of identity and a coherent life story is only just beginning in the teen years (e.g., McAdams, Diamond, de St. Aubin, & Mansfield, 1997), children and to some extent adolescents are unlikely to exhibit recall biases driven by implicit theories of the self or motivation for self-enhancement. Thus children’s and possibly adolescents’ retrospective memory errors may be more random than systematic.

In sum, there are numerous applications of retrospective methods in developmental science, and each of these suffers from some significant shortcomings that are linked to the
fallibility of memory. The memory literature suggests that the histories we recall are our subjective impressions of how we used to be, often reflecting intervening experiences and current beliefs about how we have changed. The next section presents data from one of my own investigations (Greenhoot et al., 2005) to provide a comprehensive illustration of the use and pitfalls of retrospective methods in developmental studies.

**Illustration: Children’s and Mothers’ Reports of Family Violence**

This illustration of retrospective methods draws on data from Greenhoot and colleagues (2005) to compare mothers’ and children’s accounts of family violence and control events with baseline data collected 6 years previously. This investigation was carried out in the context of a prospective longitudinal study of women and children exposed to family violence, directed by Laura McCloskey (see McCloskey, Figueredo, & Koss, 1995, for further details). The study was originally designed to examine the impact of domestic violence and abuse on women’s and children’s mental health, but our follow-up assessments on this sample have provided a rich and unique opportunity to examine the children’s and mothers’ memories and retrospective reports. In the first year of the study, McCloskey and colleagues (1995) recruited 363 battered and nonbattered women and each one of their children between the ages of 6 and 12 years to participate in a study on families. The children and mothers participated in separate interviews, during which an abbreviated version of the Conflict Tactics Scale (Straus, 1979) was used to question mothers and children about the frequency of the mother’s partner’s use of specific forms of aggression (e.g., hitting with an object) against the mother (e.g., being pushed, beaten, or kicked) or child (i.e., being pushed, kicked, or burned) in the previous year. Children whose year 1 reports were not sufficiently corroborated by their mothers were excluded from this analysis along with their mothers, as were dyads that did not participate in the follow-up interview at year 6. A final sample contained 234 dyads; 81 of these (the control group) reported no year 1 exposure to mothers- or child-directed family violence, and 153 (the exposed group) reported some form of family aggression in year 1. Several nonabusive control events (e.g., grandparent dying, changing schools, losing a friend, moving to a new home) and family and life circumstances (e.g., name of teacher, location of home, names of others living in home) were also documented at the baseline assessment.

Six years later, when the children were 12–18 years of age, mothers and youths participated in separate 3-hour interviews that included questions about family relationships, social adjustment, psychopathology, and criminal behavior. In this interview, they were asked open-ended questions about their year 1 life circumstances and a series of open-ended and yes-or-no questions about the occurrence of specific forms of family aggression in year 1 and the control events. The exposed youths reported slightly more than half of the child-directed acts that they had disclosed 6 years earlier and less than half of the previously disclosed mother-directed acts. In contrast, their rates of correct “no” responses to questions about acts that had not occurred were quite high. Thirty-four percent of the teens exposed to spousal violence did not report any spousal violence at all, and 21% of those exposed to child-directed aggression failed to recall or report it altogether. Finally, the data in the bottom half of Table 12.1 show that youths in the control group very rarely reported family violence in their retrospective reports of year 1. Together, these patterns
suggest that the adolescents tended to retrospectively underreport their childhood exposure to year 1 violence, particularly when they were not the victims. Indeed, on the basis of their retrospective reports, about one-third would not have been identified as exposed to spousal abuse, and one-fifth would not have been classified as exposed to physical punishment or abuse. There are numerous explanations for these retrospective reporting errors. One possibility is that some participants chose not to disclose past family violence to the interviewer. Indeed, Femina and her colleagues (Femina, Yeager, & Lewis, 1990) reported that when asked about their failures to recollect adolescent experiences of physical abuse, young adults often admitted to deliberate nondisclosures to protect their parents, to avoid embarrassment, or to attempt to forget the experiences. Nonetheless, we found that measures of participants' willingness to disclose other personal information in the interviews were unrelated to memory for family aggression, suggesting that nondisclosure cannot completely account for the retrospective errors we observed. Additional analyses on the child data showed that, consistent with the basic memory principles outlined at the beginning of this chapter, retrospective errors were least likely to occur when the children were older at year 1, when their attitudes about mothers' partners were more in line with aggressive and abusive behavior, and when their recent experiences (e.g., exposure to recent family violence) were more similar to those at year 1.

### TABLE 12.1. Proportions of Year 1 Family Violence Acts Reported and Correctly Rejected at Year 6 in Exposed and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Exposed group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Youth(Reported)</td>
<td>Mother(Reported)</td>
</tr>
<tr>
<td>Child-directed aggression</td>
<td>.56 (.38)</td>
<td>.58 (.44)</td>
</tr>
<tr>
<td>% correctly rejected</td>
<td>.87 (.26)</td>
<td>.62 (.37)</td>
</tr>
<tr>
<td>Mother-directed aggression</td>
<td>.44 (.41)</td>
<td>.63 (.53)</td>
</tr>
<tr>
<td>% correctly rejected</td>
<td>.75 (.73)</td>
<td>.69 (.40)</td>
</tr>
<tr>
<td>% reported (false alarms)</td>
<td>.06 (.14)</td>
<td>.07 (.21)</td>
</tr>
<tr>
<td>Correctly rejected</td>
<td>.86 (.29)</td>
<td>.56 (.41)</td>
</tr>
<tr>
<td>% reported (false alarms)</td>
<td>.01 (.05)</td>
<td>.0 (0)</td>
</tr>
<tr>
<td>% correctly rejected</td>
<td>.96 (.19)</td>
<td>.83 (.41)</td>
</tr>
</tbody>
</table>

*Note*: "Correct recall" refers to the proportion of violent acts disclosed at year 1 that were correctly reported at year 6 by the exposed group; "false alarms" refer to the proportion of violent acts that did not occur in the control group, reported at year 6; "correct rejections" refer to the proportion of acts that did not occur at year 1 that were correctly denied or rejected at year 6, either group.
The data in the right column of Table 12.1 suggest that mothers in the exposed group showed less underreporting of year 1 family violence than their children. Interestingly, the mothers reported a similar percentage of the child-directed acts from year 1 to that reported by their children and a higher percentage of year 1 mother-directed aggression. At the same time, exposed mothers’ rates of correct rejections were quite low, suggesting that they were confused about the specific details of their family violence histories from year 1. On the basis of the retrospective reports, 47% of the mothers would have been misclassified as nonexposed to mother-directed aggression, and 30% of the children would have been misidentified as nonexposed to child-directed aggression. As shown in the bottom half of Table 12.1, mothers in the control group were quite accurate in reporting their exposure (or lack therefore) to spousal violence in year 1, yet they did make some errors of commission (i.e., false alarms) on child-directed aggression. Such errors may reflect normative beliefs and attitudes about physical punishment in this sample, as corporal punishment (e.g., pushing, spanking) was quite common in both the exposed and control groups (McCloskey et al., 1995). Thus these errors could reflect confusion between specific forms of corporal punishment at the time of recall.

Finally, in response to the questions about major nonabusive life events (e.g., changing schools, moving to a new home) from year 1, the teens correctly reported only 38% of the events, and the mothers recalled about 20% (see Table 12.2), rates that are even lower than those observed for reports of family violence events. Both mothers and teens correctly remembered about 75% of their year 1 life circumstances (e.g., name of teacher) during that same year. Thus adults’ and youths’ retrospective reporting of specific life events appears to be more prone to error than reporting of more enduring life circumstances.

Taken together, these data suggest that youths’ and mothers’ retrospective reports of events and circumstances after a 6-year delay underestimated their previous exposure to family violence, as well as the occurrence of nonabusive control events. Furthermore, nonexposed mothers and youths whose baseline documentation classified them as nonexposed rarely retrospectively reported any family violence in year 1, with the exception of mothers’ reports of child-directed punishment and abuse. Thus the most common retrospective errors in this data set were errors of omission rather than commission. The few errors of commission may well reflect widely held beliefs about child rearing.

**TABLE 12.2.** Proportions of Year 1 Control Events Reported and Correctly Rejected at Year 6, collapsed across Exposed and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reporter</th>
<th>Youth</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>% correct recall</td>
<td></td>
<td>.38 (.35)</td>
<td>.20 (.19)</td>
</tr>
<tr>
<td>% correct rejections</td>
<td></td>
<td>.83 (.19)</td>
<td>.35 (.21)</td>
</tr>
</tbody>
</table>

*Note.* "Correct recall" refers to the proportion of control events disclosed at year 1 that were correctly reported at year 6; "correct rejections" refers to the proportion of acts that did not occur at year 1 that were correctly denied or rejected at year 6.
Future Directions

In sum, current memory theory and research suggest that retrospective report methods may not always accurately measure the constructs that they are intended to measure. The fact that retrospective methods have a number of shortcomings is not a new insight. Myrtle McGraw questioned the wisdom of memory as a source of objective data seven decades ago (McGraw & Molloy, 1941). The contemporary literature on memory and memory development provides information about when and why reports might be biased and in doing so sheds light on the conditions that lead to their optimal application. Memory-based reporting errors may be minimized by conditions that involve shorter delays and older rememberers, and that evaluate directly observable phenomena that do not activate strongly held beliefs about child or self-development.

In spite of these cautions, some researchers have argued that retrospective methods have an important place in developmental science. In contrast to Widom and colleagues’ (1999) findings, several studies have revealed similar predictive values for some variables whether they are measured retrospectively or prospectively (e.g., Herrenkohl et al. 2003; Sandstrom & Coie, 1999; Schwebel, Brezausek, Ramey, & Ramey, 2004; Shaffer, Huston, & Egeland, 2008). Furthermore, others have pointed out that retrospective methods for identifying child maltreatment may identify those for whom there were ongoing cases of abuse during the original, prospective measurement (Kendall-Tackett & Becker-Blease, 2004), although the findings of Greenhoot and colleagues (2005) provide little support for this argument. Nevertheless, sometimes researchers are interested in the subjective representative of childhood itself rather than an objective measure of reality, and in these situations retrospective reports are highly appropriate. For example, the Adult Attachment Interview, another very common tool involving retrospective reports, was designed for just such a purpose (George, Kaplan, & Main, 1985).

What are some alternatives for surmounting the design challenges that so often prompt retrospective methodology? One option that could be employed in studies of atypical or infrequent developmental outcomes is to conduct focused prospective studies that begin with identification of a vulnerable sample (e.g., Rogers, 2009). For instance, if it is known that individuals in particular subgroups have an increased likelihood of a particular developmental pattern, one might choose to track outcomes in an “at risk” sample over time. Another option is to collect convergent data so that retrospection from a single individual is not the only measure on each participant (Shaffer et al., 2008).

Conclusions

In sum, a reliance on retrospective reports should be discouraged in developmental research if at all possible, but there are several principles to keep in mind should this methodology be the only option for data collection in a developmental investigation. First and foremost, a consideration of the age at which the reported items occurred is critical. Individuals are unlikely to retain memories of information and events that occurred during the period of infantile amnesia (roughly 0–5 years), and even after that period there are age-related increases in the ability to encode and maintain memories over the long term. Similarly, caution should be used in interpreting retrospective reports of past events, behaviors, or attributes after extensive delays, especially if there has been exposure during the delay
interval to intervening events or misinformation. Thus retrospective reports may be most defensible and valid under the following conditions:

- The reporters were adults or adolescents at the time of the events, behaviors, or attributes being reported.
- The delay interval between the target events, behaviors, and attributes and the time of reporting is short.
- Exposure to related intervening events or potential sources of misinformation has been minimal.
- The reporter is unlikely to have strongly held beliefs about the domain being reported on.
- The researchers are interested in the participants' subjective representations of the past rather than an objective measure of reality.

References


