

Woozles: Their Role in Custody Law Reform, Parenting Plans, and Family Court

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In the international debates on custody law reform and in individual custody decisions in families and in courts worldwide, social science research is often misused and abused. In this article I describe the process by which data can become distorted in ways that steer policymakers, family court personnel, and parents off course in regard to child custody decisions. I illustrate this process with a recent study that has garnered international attention and influence.

Keywords: shared custody, joint custody, parenting plans, overnighting

One of the most complex and controversial issues confronting the family court system, divorcing parents, and legislative bodies is: When parents separate, what is best for children in terms of how much time they should live with each parent? When do children benefit most from living primarily with one parent or from living with two parents more equally? Under what circumstances is spending frequent overnight time in their father's care not beneficial for children, especially for infants and preschoolers? Given the wide range of circumstances that can affect family dynamics and children's well-being, how can it be determined which overnight parenting plans are best for children? At the legislative level the question becomes: How should custody laws be revised to better meet the needs of children in contemporary families? The debates over questions such as these become especially controversial and heated when the children involved are infants or children under the age of 5 years.

Decisions on these policy issues can benefit from social science research, if the research is methodologically sound and properly applied. The purpose of this article is not to advocate for any particular parenting plan or to present the research on shared parenting custody controversies. Rather it is to describe the way in which social science data can be used to steer policymakers, family court personnel, and parents off course in regard to parenting plans and custody law reform—and to illustrate this process with a recent study that has garnered international attention in regard to parenting plans for infants and other children 4-years-old and younger. The aim is to answer two questions: How can social science data be used to “woozle” us into believing things that are not true or that are only partially true? Is there any study that illustrates the process and the impact of woozling with regard to parenting plans or custody law reform for infants and preschoolers?

What Is a Woozle?

Nearly 30 years ago, Richard Gelles (1980) popularized the concept of the “woozle effect.” A sociologist whose area of expertise was the research on domestic violence, Gelles (1980) was concerned about how this research was frequently misrepresented and misused by advocacy groups for their own political purposes. In particular, he was troubled because only those studies that supported a particular advocacy position—many of which were seriously flawed—were being presented as “the” research evidence, while those studies refuting the position were being ignored. As a consequence, many false beliefs about domestic violence were perpetuated—beliefs Gelles (1980) referred to as woozles.

Gelles, along with Beverly Houghton who originally coined the term *woozle effect* (Houghton, 1979), compared these distortions and manipulations of the data to the children's story, *Winnie the Pooh* (Milne, 1926). In the story Winnie the Pooh dupes himself and his friends into believing that they are being followed by a scary beast—a beast he calls a woozle. Although they never see the woozle, they convince themselves it exists because they see its footprints next to theirs as they walk in circles around a tree. The footprints are, of course, their own. But Pooh and his friends are confident that they are onto something really big. In fact, their foolhardy actions are based on faulty “data—a woozle (Gelles, 1980). More recently, Gelles (2007) described the process of woozling as “the use, abuse and misuse” of social science research.

As defined by Gelles (1980), a woozle is a belief or a claim that is not supported—or is only partially or tentatively supported—by the empirical evidence. But because the claim has been repeatedly cited and presented in misleading ways, the public and policymakers come to believe it. As a result, data that are not accurate or that are only partially accurate come to be accepted as the “scientific evidence” on that particular topic. Put differently, a woozle is a definitive statement based on data that are very limited, flawed, ambiguous, or erroneous. Through a number of different “woozling” techniques, these flawed, scanty, or inaccurate data become magnified and widely disseminated, overshadowing data that would challenge it. Certain aspects of the woozle might be partially true in that some findings in a few studies can be interpreted

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in ways that lend some support to portions of the woozle. That is, there might be a small grain of truth buried in a bushel of untruths—which is one reason why woozles are so hard to challenge. Often a woozle also has an inherent appeal to people’s prevailing beliefs or to their personal feelings about a particular topic, which also makes it difficult to dismantle the woozle.

Eventually the processes that have promoted the woozle are successful enough that the flawed, limited, or exaggerated data come to have an impact on public opinion and public policy. As Winnie the Pooh and his friends who are led astray by their own footprints, we are led astray by the questionable, limited, or contradictory evidence underlying the woozle. Describing the woozling process in the field of physics in his book, *Voodoo Science*, Park (2000) puts it simply: we have been bamboozled.

The woozle itself arises from a pattern of events and circumstances, not from any single factor. According to Gelles (1980), one of the most important factors was frequently citing one or two studies in different publications, even when those particular studies were methodologically flawed and drew questionable conclusions. But, as will be described shortly, other researchers have described many paths through which the data from one or two studies can be manipulated, misperceived, and mishandled in ways that create woozles.

A Famous Divorce Woozle

In the social sciences one of the most well-known examples of a woozle arose from a single study by the sociologist, Lenore Weitzman (1985), which was widely disseminated in her bestselling book, *The Divorce Revolution: The Unexpected Social and Economic Consequences for Women and America*. The woozle was this: Weitzman claimed that most American women suffer a 73% decline in their standard of living after a divorce, while their ex-husbands enjoy a 42% increase. The ground was fertile for the growth of this particular woozle because Weitzman’s book was published at a time when the public was worried about the rising divorce rates and about the possible negative impact that the new and controversial “no-fault” divorce laws might have on women. Although her conclusion was based solely on her one study with 228 people from Los Angeles, and although her data were at odds with the prevailing social science research and government statistics, her message “went viral” as we would say today. In part the study was widely accepted because it confirmed what many people already believed: Most men exploit their ex-wives financially. For more than a decade, the study maintained its popularity and its influence. The book was reviewed in at least 22 social science journals, 12 law reviews, and 10 national magazines—and was cited over 25 times in national magazines, in at least 24 legal cases in state appellate and supreme courts and once in the U.S. Supreme Court. It received the American Sociological Association’s 1986 Book Award. From 1986 to 1993, the book was cited in 348 social science articles and in more than 250 law review articles as evidence that divorce laws needed to be changed because they discriminated against women financially (Sommers, 1994).

Some scholars immediately began to question Weitzman’s (1985) conclusions and asked her to provide the raw data for replication. It took more than a decade for Weitzman to admit that her conclusions had been wrong. Researchers who tried to reconstruct her database found that women’s standards of living de-

clined by 27% (not 73%) and that men’s increased by 10% (not 42%; Peterson, 1996a; Peterson, 1996b; Weitzman, 1996). Keep in mind that the defining hallmark of a woozle is not whether the authors of the original study made errors in analyzing their data or whether they misrepresented their data. The Weitzman study exemplifies a woozle because seriously flawed data from a single study became an international sensation and had a widespread impact on divorce laws and on public opinion. It is the process by which Weitzman’s limited and flawed data became so widely accepted and so influential that characterizes this study as one of the more infamous examples of a woozle in social science.

Keeping the Weitzman (1985) woozle in mind, the question is whether something similar might be occurring in regard to the current debates over custody law reform and parenting plans for children under the age of 5 years. Among others, Johnston (2007) noted that family law is an area in which woozling might be especially likely to occur: “Distortions and misuses of social science data in family law matters derive partly from the political nature of the issues and from gender wars” (p. 16).

How Are Woozles Born and Raised?

Before illustrating how one particular woozle has arisen in regard to child custody, we have to be able to recognize the many ways in which woozling occurs. How do studies become part of a woozle? How do data from a study get misrepresented into something that barely resembles the researchers’ original findings? As we will see, no one person or no one event can be held accountable for creating or for promoting a woozle. The process involves a constellation of factors, interacting with one another in ways that often are unpredictable and unforeseen. As described below, academicians have expanded on Gelles (1980) original ideas about how woozles are created—describing numerous ways in which data become distorted into woozles. Many are beyond the control of the authors of the original study, whereas others clearly involve their intentional or unintentional participation.

Evidence by Citation

According to Gelles’s (1980) original description of woozles, they often began when one or two studies are frequently and repeatedly cited in articles or at conferences and seminars—while the bulk of the research is ignored or rarely mentioned. The more frequently the study is cited, the more credible it becomes. In other words, people naively assume that just because a particular study is being widely cited and discussed, its conclusions are valid and reliable. Gelles (1980) referred to this process as “evidence by citation.”

Misrepresenting Other Researchers’ Data

Woozles also are linked to professionals’ discussing and writing about a study’s findings without ever having read it—or having read only a synopsis or an abstract. In this way, the data become misrepresented and studies are cited in support of positions that are directly opposite to their conclusions. The sociologist Johnston (2007) called these misrepresentations “scholarly rumors”—erroneous beliefs that arise when scholars misquote data from a study and then quote one another without checking back to the original

source. For instance, the authors of the original study may have stated clearly that their data were not statistically significant and that their conclusions were speculative and inconclusive. But the data can end up being reported as unequivocal and significant. Another way of misrepresenting data is to report several studies as having reached similar conclusions, when in fact they did not. This buttresses the findings of a single study by creating the impression that there is an emerging consensus, a pattern, or a trend, when there is not.

Cherry Picking

Moreover, writers or speakers may choose to report only a few studies or only some of the findings from a particular study—a bias referred to as “cherry picking” (Johnston, 2007). For example, articles claiming to be reviews of the literature may report very little of the existing data, choosing only to report those studies that support one view. Johnston (2007) also noted another version of cherry picking: Researchers’ acknowledging the limitations of their own study when writing in professional journals or speaking to other researchers—but not when discussing their study with the media or with audiences where other researchers are not there to challenge them. In other words, the researchers take a far more moderate position in the presence of scholars who are knowledgeable on the topic than they do with audiences who are more naïve and more easily misled. By cherry picking, only those studies or only those interpretations of ambiguous and contradictory data that support the woosle are presented.

The White Hat Bias

Another version of cherry picking is the “white hat bias”—a phrase coined by public health researchers Cope and Allison (Cope & Allison, 2010) to describe the bias in reporting the data on soft drinks and obesity. As with the good guys wearing the white hats in the cowboy movies, well intentioned authors can be biased in reporting the research because they are trying to achieve a “righteous end.” For example, in their meta-analysis, Cope and Allison found that the impact of consuming sugared drinks was far smaller than reported in the academic literature on obesity. Attributing this error to the white hat bias, Cope and Allison urged authors to be more humble and urged journals to set higher standards when reporting the research literature.

Confirmation Bias

A woosle also is more likely to arise and to spread when it confirms beliefs that people already hold—an effect known as “confirmation bias” (Chabris & Simons, 2010). We are overly critical and dismissive of data that contradict our existing beliefs and are too willing to accept data that confirm them. Confirmation bias might be especially relevant in research related to child custody because most people have strong beliefs and feelings related to gender roles and parenting. For example, people may believe that females have a maternal instinct that makes them better suited than males to raising children. This belief, in turn, would tend to make them more receptive to believing research studies—or woosles—that confirm that particular belief.

Researchers’ Contributions to Woozling Their Data

Researchers themselves can also inadvertently—or in some cases intentionally—contribute to the woozling of their data. For example, when presenting their findings, researchers might not report the data that contradicted their hypothesis. Or the researchers might exaggerate the significance of their data, present their findings in ways that are misleading, put disproportionate emphasis on some of their findings while ignoring others, or make policy recommendations that over reach their findings. They might also frame their research questions and interpret their data to support the desired conclusions or from only one theoretical position. Researchers also might create their own measures, use unorthodox or invalid procedures, or rely on abridged versions of standardized scales that have no established validity or reliability. As a consequence, data that are uninterpretable or ambiguous are presented as if they are valid and reliable. Researchers also might minimize or ignore, rather than acknowledge and address, the ambiguous or contradictory data in their study. Or they might generalize their findings to populations that have little in common with the sample in their study. Finally, researchers might mislead people to believe that their study was based on large numbers of people when in fact it was not. For example, they can inflate the numbers by alluding to the total number of people in the large database from which their data were taken, diverting attention away from the fact that the actual samples in their study were much smaller.

Researchers may also contribute to the woozling of their own data by trying to silence or to demean their critics. One technique is to claim they are being unfairly “picked on” by their peers, or that other scholars are “conspiring” against them or trying to “polarize” people (Park, 2000). Another technique is to try to discredit critics by attacking their character—for example, accusing them of being fathers’ rights activists or feminists (Johnston, 2007). Another way to discredit critics is to present oneself as the “protector” of or the “spokesperson” for the disadvantaged, the victimized, or the weak. For example, in regard to custody issues, some researchers might claim that they are the ones who are speaking on behalf of the children and who are putting the children’s needs first—implying that those researchers who do not share their point of view are not equally concerned about the children and are foolishly putting the parents’ needs and wishes ahead of the children’s needs.

The sociologist, Joel Best, wrote extensively about the misuse of statistics and research that is part of the woozling process (Best, 2001, 2008, 2013). In regard to researchers’ biases, he explained (Best, 2001) that we mistakenly assume that research data

simply exist, like rocks, completely independent of people; and that people gather statistics much as rock collectors pick up stones. This is wrong. All statistics are created through people’s actions: people have to decide what to count and how to count it. People have to do the counting and have to interpret the results and to decide what the numbers mean. (p. 27)

Given this, Best (2001) suggested we ask ourselves: Is the author of this study someone who has any stake in its outcomes?

In a similar vein, researchers may inadvertently contribute to the woozling of their data through the media. For example, Park (2000) noted that physicists sometimes contributed to distortions of their data by presenting their findings directly to the media and

by using dramatic anecdotal stories to make their data more memorable. It is ironic that academicians may inadvertently contribute to other researchers' woozles by not being engaged enough with the media. Lilienfeld (2012) who wrote extensively on how flawed social science data contributed to popular myths, pointed out that most university researchers were reluctant to devote their time to disseminating data through the media, even though doing so would help to combat the most flawed data that tended to attract the most media attention. Not only do most universities not reward this type of public service, disseminating research through the media is often frowned on by academicians. The unfortunate result is that the media end up having to rely on data from people who are not full-time university researchers which, in turn, can contribute to woozles (Lilienfeld, 2012).

Compelling Stories, Confidence, and Credentials

Both Best (2001) and Kahneman (2011), also remind us that how the data were presented can contribute to distortions. For example, when a study is presented along with compelling, personal stories, we are more likely to remember it, to repeat it, and to believe it. These anecdotal stories or dramatic case studies are often exaggerated and generally not representative of the problem at hand (Best, 2001). Having aroused people's emotions, these techniques increase the odds that the data will be more widely disseminated and, in too many cases, more widely woozled (Kahneman, 2011). For example, an actress who repeatedly claimed on TV that her child had become autistic after being vaccinated was cited by some parents as the reason for not vaccinating their children, despite the fact that the scientific literature shows no connection between autism and vaccinations (Chabris & Simons, 2010).

The use of dramatic anecdotes or emotionally laden personal stories is a well-known technique in the art of persuasion, often used by politicians, for example. Unfortunately anecdotal stories and case studies can contribute to people's misunderstandings of the data, especially if the data are related to controversial issues such as child custody. Case studies and anecdotes also make it easier for advocacy groups to misuse data to suit their own agenda. Given this, researchers can reduce the odds of their data being woozled by presenting case studies or anecdotes only within the context of empirical data—and by steering clear of dramatic stories that might convey an unbalanced view of unresolved issues or ambiguous data.

Cognitive psychologists also have demonstrated that we are more likely to believe data presented by a confident or a well-known person (Chabris & Simons, 2010). For example, we find data more credible coming from people with important sounding titles or prestigious institutional affiliations: "Dr. X, executive director of the prestigious Y institute and one of the world's experts on . . . explains that . . ." (Johnston, 2007, p. 18).

Simple Explanations and Neuroscience

We are also more likely to accept data that offer relatively simple explanations for complicated questions (Kahneman, 2011). Our preference for simplicity may be one of the reasons why it has become increasingly popular to cite neuroscience data to buttress the findings of social science studies (Lilienfeld, 2012). As Lil-

ienfeld (2012) explained, neuroscience data are appealing because they tend to be relatively simple and because we assume they are more objective and more "scientific" than social science data. For example, experimental subjects were more likely to accept the findings of a social science study as true when the words "brain scans indicate" or other phrases from neuroscience were included in the description. Even when the interpretations of the data were illogical, and even though there was no demonstrated link between the behavior under study and the neurological data, the subjects were more willing to accept the results of the social science study (Weisberg, 2008). This finding alerts us to the possibility that when social scientists invoke neuroscience data in support of their study's findings, their data might garner more credibility than it actually warrants—and might consequently be more easily incorporated into an existing woozle.

Policy Recommendations and Organizations' Guidelines

The final hallmark of a woozle is that the limited, ambiguous, or flawed data that underlie it become the basis for public policies and guidelines for professional organizations. In a recent *American Psychologist* article (Rosik, Jones, & Byrd, 2012), the authors pointed out that accuracy and precision in reporting data are of utmost importance when those findings are being used to write guidelines or to make pronouncements that affect practitioners. No organization's guidelines or policy recommendations should be based on only a few studies or issued in the absence of conclusive evidence. When policies or guidelines are based on only a few studies, we have reason to suspect that woozling may be at work.

Characteristics of Woozles

To summarize, many scholars in the social sciences and in other disciplines have written extensively about the ways in which data can become distorted into woozles. Among the most common processes that have been discussed by these scholars are the following:

- In articles and in seminars a few studies are cherry-picked to support one position.
- Two or three studies are repeatedly cited and discussed as "the research" on a topic.
- Reviews of the research, especially those making policy recommendations, are based primarily on the same few studies, ignoring the bulk of the research.
- The data are often presented in dramatic ways with anecdotal stories, case studies, or emotionally laden pictures and graphics.
- The significance of the findings are overstated while the limitations are understated.
- Data from small or nonrepresentative samples are generalized to the general population.
- Only one theoretical perspective is used to frame the question and interpret the data.
- The data are based on measures with no established reliability or validity.
- Media reports, synopses, abstracts, or press releases overstate or misrepresent the actual data in the study.
- Data that are not statistically significant or that are contradictory and ambiguous are reported as important.

- The study's conclusions have an inherent appeal because they confirm widely held beliefs.
- Findings that do not support the researchers' hypothesis are dismissed or minimized.
- Definitive statements are made based on very limited or ambiguous data.
- The authors promote their own study as a basis for a particular position without putting their data in the context of the larger body of evidence.
- Studies are presented together as if they reached the same conclusion, when in fact they did not.
- The authors of a study seem reluctant to acknowledge any of the weaknesses pointed out by other scholars.

Woozles Versus Data: How to Convince Winnie There Is No Woozle

In regard to the current debates over custody law reform and parenting plans, the woozle we are going to examine is this: Infants and children 4 years and younger who spend overnight time in their fathers' care are more irritable, more severely distressed and insecure in their relationships with their mothers, more poorly behaved with their peers, more stressed and thus more likely to wheeze, more easily distracted (less persistent), and more likely to have trouble regulating their emotions. In short, overnighting has a deleterious impact on infants and other children under the age of 4 years.

This particular woozle attracts the attention of the public, policymakers, and family court professionals for at least two reasons. First it relates to two controversial custody questions: How much time should infants and preschoolers spend with each parent after their separation? Do children this young need to sleep in the same home every night and, if not, how many nights should they spend in each parent's care? More specific, at what age are shared parenting plans (35%–50% time with each parent) appropriate for children? Second, this woozle arouses many people's emotions because it affirms a belief that some people hold dear, but that others find insulting, outdated, and irrational: the belief that women are better suited than men to raise children—especially infants and toddlers. While the woozle appeals to people who believe females have a maternal instinct or neurological structures in their brains that better equip them to bond and communicate with infants, it offends people who believe that men and women are equally capable of parenting their children, including their infants.

The woozle is related to two separate custody issues: overnighting and shared parenting. The term *overnighting* is typically used only when referring to infants and to preschool children. Overnighting literally means how many nights these very young children spend away from their mother in their father's care. When the number of nights that children (of any age) spend with their fathers exceeds 30%, the parenting plan is generally referred to as "shared parenting," "shared care," or "shared residence." In older studies shared parenting plans were referred to as joint or shared physical custody. In contrast, the terms *primary care* or *sole custody* are used interchangeably when children live primarily—or exclusively—with their mother and spend less than 30% of the time with their father. Typically primary care/sole custody parenting plans allot only two weekends a month (4–6 overnights) and one midweek visit of a

few hours to the father, for a total of roughly 20% of the parenting time. Unlike these social science definitions, the legal definitions of shared care/shared parenting/shared physical custody that are used to determine child support payment vary from country to country and from state to state.

To determine whether this statement is a woozle and, if it is, to challenge it, we have to know the results of the other studies that have gathered data about children under the age of 5 years whose parenting plans involved overnighting. We also need a description of the samples to know which findings are applicable to the general population of divorced parents and which are not. There are currently 31 studies that have compared the outcomes of children who live in shared parenting families (30%–50% of the time) to children who live with their mother and spend varying amounts of overnight time with their father. Only eight of these 31 studies have included infants and children under the age of 6 years. Of those nine, only four focused exclusively on infants and children under the age of 5 years. More detailed discussions of most of these studies are available elsewhere (Lamb, 2012a; Pruett, Cowan, Cowan, & Diamond, 2012). But a brief summary shows how little support these nine studies lend to the woozle that spending overnight time in their fathers' care has a deleterious impact on infants and toddlers.

The studies are presented in three distinct groups: all formerly married parents, largely formerly married parents, and rarely formerly married. There are likely to be significant differences between these three groups in terms of socioeconomic variables, age, ethnicity, longevity of their relationship, and factors such as incarceration, poverty, and parenting skills that are generally associated with poor outcomes for children. For these reasons, overlooking or minimizing these differences in the research studies can contribute to inappropriate custody decisions and to misguided recommendations regarding custody law reform. Data from studies with high numbers of never married parents, especially when many of them were not even living together when their child was born, should not be applied to formerly married parents who were raising their child together before their separation.

The Formerly Married

Three of the eight studies only included parents who had formerly been married, meaning these data are the most applicable to divorced parents. The first study compared 58 children who lived with their mother and 35 who lived at least 35% time with their father, with half of them being 4-years-old or younger (Kline, Tschann, Johnston, & Wallerstein, 1989). One to 2 years after their parents' separation, there were no differences in social or behavior adjustment between the two groups. The frequent overnighters, however, had better relationships with their fathers and were better adjusted emotionally.

The second study, the Stanford Custody Project, followed children from 1,100 divorced families in California over a period of 4 years (Maccoby & Mnookin, 1992). What made this study so unique for its time was that the children in 150 of these families were overnighting 30% to 50% time with their fathers. In these families, 125 of the children were infants or preschoolers younger than 5 years. At the end of 4 years, the frequently overnighting children were better off than the others on all of the standardized measures of their academic, emotional, physical, and behavioral

well-being. Three years after the parents' divorce, only 1.6% of the frequent overnights' fathers were seeing less of their children compared to 56% of the other fathers.

The third study assessed children from nearly 600 shared parenting and 600 primary care families in Wisconsin (Melli & Brown, 2008). Roughly 40% of the children were under the age of 5 years. Three years after their parents' divorce, the frequently overnights (35%–50% time) children had better relationships with their fathers, were happier and less depressed, and had fewer health problems than the less frequently overnights children. There were no differences on measures of emotional health. Moreover, 82% of the frequent overnights' fathers were spending just as much time with their children as they had 3 years earlier, in contrast to only 55% of the other fathers.

Majority Formerly Married

In three other studies the majority, but not all, of the parents had been married before separating. A sizable minority had separated before the child was born; and others had never lived together at all.

The first study merits careful attention because it is so frequently and mistakenly cited as evidence that overnights interferes with infants' attachments to their mothers. The limitations of this study have been pointed out by a number of scholars (Cashmore & Parkinson, 2011; Lamb & Kelly, 2001; Pruett et al., 2012; Warshak, 2002). Because a sizable minority of the parents had never been married or lived together, many of the infants had no relationship with their fathers before the overnights began. Moreover, all of the infants, even in the married families, had exceptionally high levels of disorganized attachments. Then too, the overnights infants' parents were far more combative, less communicative, more violent, more likely never to have lived together, and more likely to have children from several different relationships than the parents of infants who did not overnights. For many reasons then, caution should be exercised before generalizing these data to separated parents in the general population.

The researchers compared infants 12- to 20-months-old in three types of families: 52 in intact families, 49 who never overnights, and 44 who occasionally overnights (Solomon & George, 1999). Only nine of the 44 overnights spent more than four nights a month with their father. The only factors assessed were how securely the infants were attached to each parent and, 1 year later, how well the toddlers performed on a challenging task with their mother in a laboratory playroom. Compared to nonovernights, the overnights were no less securely attached to their mothers: "Neither the particular pattern of overnight visits nor the total amount of time away from the mother predicted disorganized attachment. Insecure attachment in the overnight group was associated with high parent conflict and low parent communication" (Solomon, 2013, p. 269). The fact that the overnights had more disorganized attachments than infants in married families was attributed to the fact that their parents had so much more verbal and physical conflict and much worse communication than the nonovernights' parents.

In the second part of the study 1 year later, the overnights did as well as the nonovernights on the challenging task with their mothers. There was no way to determine whether the overnights toddlers were more distressed than the nonovernights when

separated from their mothers because these two groups were never compared. The nonovernights and the intact family toddlers were combined into one group. Almost one third (27%) of this "combined" group were upset after a second brief separation from their mothers in the laboratory, compared to 50% of the overnights infants. This finding was difficult to interpret because the overnights and nonovernights were not directly compared and because some overnights had only recently begun overnights, while others had been overnights for a year. Solomon and George (1999) also cautioned that the infants' behavior in a contrived situation in a laboratory playroom should not be generalizable to shared parenting families:

We tentatively conclude that overnight visitation schedules can disorganize the child's attachment strategies, but that such disorganization does not necessarily pervade or reflect the overall quality of the mother-child relationship . . . Whereas there is now considerable research demonstrating poor developmental outcomes for children in normative and other kinds of high risk samples who are classified as insecure-disorganized, based on our finding, the same prognosis should not necessarily apply to disorganized and unclassifiable children who are participating in overnight visitation schedules. (Solomon & George, 1999, p. 258)

Even more recently Solomon (2013) reiterated the study's original conclusions: "When parents have open lines of communication about their infant, there is little or no reason to be concerned about the long term developmental outcome for such children" (p. 276). In sum, this study did not find a significant link between overnights and difficulties in emotional regulation or insecure attachments.

In the second study (Pruett, Ebling, & Insabella, 2004) the researchers assessed 132 children between the ages of 2 and 6 years on several standardized measures of well-being. Most (75%) overnights at least once weekly, even though 25% of their parents had not been married before separating (Pruett, Ebling, & Insabella, 2004). For the 2- and 3-year-olds, the overnights were no different from nonovernights in regard to: sleep problems, depression, anxiety, aggression, or social withdrawal. Their fathers, but not their mothers, said the overnights toddlers were somewhat more irritable. For the 4- to 6-year-olds, especially for the girls, the overnights were better off in regard to attention problems and social withdrawal and were no different from the nonovernights on the other measures. It is also worth noting that having several different adults taking care of them throughout the day had no negative impact on the infants or toddlers, but having an inconsistent, erratic parenting schedule did—especially for the boys.

In the third study involving 7,118 separated Australian parents, only 50% had formerly been married and 12% never lived together—meaning more caution should be exercised before applying these findings to divorced parents (Kaspiew et al., 2009). For children under age 4 years, there were 3,513 children overnights less than 35% time and 480 overnights 35% to 50% time, 201 under the age of years, and 266 ages 3 to 4 years. The mothers reported no differences between the two groups of children on measures of physical health or socioemotional well-being. In contrast, the fathers of the frequent overnights rated their children higher on health, learning skills, and overall progress than the other fathers. Overall the frequent overnights had marginally better outcomes, even after accounting for parents' levels of vio-

lence, conflict, and education. More important, violence between the parents had no worse impact on the frequent overnights than on the other children.

Never Married Parents

The last two studies are distinct because so few of the parents had been married and so many had never lived together. The one study (McIntosh, Smyth, Kelaher, & Wells, 2010) will be discussed in the next section because it forms the basis of the woozle.

The final study (Tornello et al., 2013) should not be generalized to divorced parents or to the vast majority of never married parents because the data were from the Fragile Families and Child Well-being database (McClanahan, 2011). All of these parents lived in the inner cities of America's 20 largest cities; 65% had no high school degree; 85% were African or Hispanic American; and 60% were below the poverty level. Slightly more than 85% were not married when their children were born. Of these, 30% were not living together and 20% no longer had a relationship with each other when their child was born. Before their children's fifth birthday, 50% of these fathers and 10% of these mothers have served time in jail (Center for Research on Child Wellbeing, 2013). For these reasons, any study using this database should take care not to generalize the findings to families who do not fit this unique profile—not even to other never married or impoverished Americans.

Using the Fragile Families database, the study (Tornello et al., 2013) examined two samples taken 2 years apart: 384 one-year-olds and 608 three-year-olds who overnights were compared to 1,062 who did not overnight and had infrequent daytime contact with their fathers. For the infants, occasional overnights meant anywhere from one to 51 nights a year; and frequent meant anywhere from 51 to 256 nights. The toddlers were categorized differently: rare overnights meant one to 12 nights a year, occasional meant 12 to 127 nights, and frequent meant 128 to 256 nights.

Consistent with the seven studies already described, there were virtually no differences between the overnights and nonovernights. On 14 regression analyses for the seven measures of well-being, only one statistically significant difference emerged: The children who frequently overnights at age 3 years displayed more positive behavior at age 5 years than the rare or no overnights groups. In regard to children's attachments to their mothers, based on reports from only 60% of the mothers, the 51 frequently overnights infants had more insecure attachments (43%) than the 219 occasional overnights (16%) and the 364 nonovernights (25%). However, in contrast to the hypothesis that overnights would be linked to insecure attachments, the infants who never overnights were more insecure than infants who occasionally overnights. The data also failed to support the attachment hypothesis for the 3-year-olds. The 60 frequent and 171 rare overnights had virtually the same ratings (37%, 33% insecure, respectively), as did the 171 occasional and 320 nonovernights (22%, 18% insecure, respectively).

Even if there had been a clear pattern between overnights and the attachment ratings, interpreting the data would have been problematic for several reasons, some of which have been noted in a recent critique of the study (Milar & Kruk, in press). First and foremost, regardless of how frequently they overnights, these

infants and toddlers did not have alarmingly high rates of insecurity compared to children from similar backgrounds in the general population. On the Toddler Attachment Q Sort (TAQ), which was an abbreviated version of the standardized Attachment Q Sort (AQS; Waters & Deane, 1985), in the general population, 49% of infants and toddlers who were living in poverty, or who were African American, or who had mothers without high school degrees were rated as insecurely attached—a number that increased dramatically to 61% insecure attachments for children younger than 21-months-old (Andreassen & Fletcher, 2007). Second, 26 of the 51 infants and 45 of the 60 toddlers in the frequent overnights group were actually living with their father 55% to 70% of the time. These children should not have been included in an analysis of attachment because their mothers were not providing most of their care. In that vein, many of these infants and toddlers may have been living mainly with their fathers because their mothers had psychological, behavioral, or substance abuse problems—the types of problems that would undermine secure attachments independent of overnights. But the greater problem is that the attachment data came from the mothers' ratings on the TAQ. Unfortunately, in a meta-analysis of 139 studies with 13,835 children, the AQS was only found to be valid when trained observers did the rating after observing the mother and child interact for several hours: "It is concluded that the observer AQS, but not the self-reported AQS, is a valid measure of attachment" (van IJzendoorn, Vereijken, Kranenburg, & Walraven, 2004, p. 1188). "The convergent and discriminant validity of the self-reported AQS does not yet warrant its use as a measure of attachment security" (van IJzendoorn et al., 2004, p. 1206). Waters (2013) who developed the AQS also expressed his concern over mothers' ratings: "I am embarrassed to say that I was surprised when most of the people who contacted me wanted to have mothers do the sorting." "If you are interested in correlations, I would avoid mothers" (Waters, 2013, p. 1). Unfortunately, because observer ratings would have been too expensive, the TAQ ratings in the Fragile Families study had to be done by the mothers. As a result, it was not clear what was being measured by the TAQ scores in this study. This problem has been acknowledged by other researchers who have used the TAQ data from the Fragile Family database (Pudasainee-Kapri & Razza, 2013). Overall then, overnights had one positive impact and no negative impact on the well-being of these infants and toddlers.

In sum, the woozle finds little, if any, support in seven of these eight studies. It is also important to note that three of the eight studies (McIntosh et al., 2010; Solomon & George, 1999; Tornello et al., 2013) were predicated on assumptions about mother–infant attachment that many contemporary attachment researchers and recent empirical studies do not support. First, these three studies assume that infants form one "primary" attachment to only one of their parents; second, that the quality (security) of this one relationship largely determines infants' abilities to regulate their emotions; third, that this attachment takes precedent over the father–infant bond especially in the first year of the infant's life; and fourth, that overnight time away from the mother, unlike daytime separation, is particularly stressful and undermines the security of their attachment. For these reasons, these three studies assumed that infant–mother attachment should be a primary measure of infants' well-being and the central focus of parenting plans. In fact, however, many researchers do not agree with these assumptions

about attachment largely because they are not consistent with recent empirical data (Cashmore & Parkinson, 2011; Garber, 2012; Hynan, 2012; Lamb, 2012a; Ludolph, 2012; Ludolph & Dale, 2012; Warshak, 2012). The wozzle is further undermined by the consensus of a large group of social scientists: “No sufficient evidence exists to support postponing the introduction of regular and frequent involvement, including overnights, of both parents with their babies and toddlers. The theoretical and practical considerations favoring overnights for most young children are more compelling than concerns that overnights might jeopardize children’s development” (Warshak, *in press*).

Goals and Outcomes of the Wozzled Study

The wozzle that overnighting causes a host of problems for infants and toddlers—notably, undermining their secure attachments to their mothers—is largely based on one study that has captured more of the public’s attention and exerted more influence than the seven studies previously discussed. The study, which will be referred to as the “preschooler study” to distinguish it from a second study that was published in the same document, was part of a report commissioned by the Australian Attorney General’s office (McIntosh et al., 2010). The central question of the preschooler study was: What impact does spending overnight time in their father’s care have on infants and other children 5-years-old and under? (Because 95% of the nonresidential parents were fathers, they will be referred as such). The underlying policy question was: Should custody laws allow or should parenting plans include overnights for children this young?

Again, it is important to keep in mind that these researchers approached the question of overnighting from only one perspective: that infants form a “primary” attachment to only one parent and later form a “secondary” attachment to their other parent. The study was also based on the hypothesis that being separated from their mothers overnight was especially stressful for infants, making it more difficult for them to be securely attached to her and to regulate their emotions. “In this light our core question was whether the frequency of overnight care was linked to emotional regulation and stress in infants and young children” (McIntosh et al., 2010, p. 143). Although the researchers clearly stated that they only framed their questions and only interpreted their data through this particular “attachment lens,” the wozzle fails to acknowledge this important limitation.

The data for the preschooler study were taken from the Longitudinal Study of Australian Children (LSAC) database, an ongoing national survey that, at that time, had collected data on almost 10,000 children (AIFS, 2012). The preschooler study, however, only included the 2,052 children under the age of 5 years whose parents were separated. But because half of these children never spent any overnight time in their father’s care and because many overnighting children were not assessed on all of the measures, the sample sizes were often quite small. For example, there were as few as 14 and never more than 20 infants in the occasional overnights group on all six measures. These small sample sizes are important because, as we will see, the study is sometimes presented in ways that imply the data came from thousands of overnighting children. In fact, the negative data on which the wozzle is based came from some of the smallest samples in the study.

The preschooler study compared three age groups: infants under 2 years, 2- to 3-year-olds, and 4- to 5-year-olds. The three family types were: no overnights, occasional overnights (1–3 nights monthly for infants and 1–9 nights for the 2- to 5-year-olds) and shared care (4–15 nights monthly for infants and 10–15 nights for 2- to 5-year-olds). It is especially important to note that “shared care” (the terminology used for “shared parenting” in this study) for the infants was not defined as 30% to 50% time, as is defined in the literature. Because there were only 11 infants who were in their fathers’ care 35% to 50% of the time, these researchers decided to define shared care as spending as few as four nights a month with their father. As with the Tornello et al. (2013) study, the study focused primarily on parents who had not been married or living together before separating—30% of whom had never lived together. The small number of married parents is important because, as we will see, the study is often cited as evidence against overnighting and shared parenting for all parents—not just for parents who have never been married or never lived together.

According to the 15 page synopsis of the 169 page report, the overall impact of overnighting for children ages zero to 4 years—even overnighting as little as once a week—was largely negative (McIntosh et al., 2010):

Young infants under two years of age living with a nonresident parent for only one or more nights a week were more irritable, and were more watchful and wary of separation from their primary caregiver than those primarily in the care of one parent. Children aged 2–3 years in shared care . . . showed significantly lower levels of persistence with routine tasks, learning and play than children in the other two groups. Of concern, but as predicted by attachment theory, they also showed severely distressed behaviors in their relationship with the primary parent (often very upset, crying or hanging onto the parent and hitting, biting or kicking) feeding related problems (gagging on food or refusing to eat) and not reacting when hurt. Such behaviors are consistent with high levels of attachment distress Thus, regardless of socioeconomic background, parenting or inter parental cooperation, shared overnight care of children under four years of age had an independent and deleterious impact on several emotional and behavioral regulation outcomes. (p. 9)

It is also important to know that there were no significant differences between the 4- and 5-year-olds in the different overnighting groups, which is why the wozzle restricts itself to children 4 years and younger.

The preschooler study’s researchers (McIntosh et al., 2010) reinforced the study’s conclusions with the views of the neuroscientist, Allan (Schore & McIntosh, 2011), who believes that female brains are neurologically equipped for communicating with and forming attachments to infants. Schore further states that: “Science suggests that one primary caregiver needs to be the constant source of bedtime routines” (Schore & McIntosh, 2011, p. 508).

Contributions of the Study

As already noted, a study is not without merit merely because its data have become part of a wozzle. The preschooler study has made several contributions to the field. It has revived interest in looking more carefully at how parenting plans affect children at very young ages. It also proposed factors related to children’s well-being and parenting plans that need to be examined in future research. Given its focus on attachment theory, it is of particular interest to researchers in that field. Because the frequency of

overnighting was considered, more detailed information could be gathered about the linear effects of overnighing. Moreover, the researchers focused mainly on children whose parents had never been married to one another—and in many cases had never lived together. This underscores the importance of gathering data about an increasingly large group of children who are born out of wedlock and whose parents live together only briefly, if at all. By raising many unresolved and controversial issues, the study serves as a reminder that more research is needed on overnight parenting plans for the youngest children.

Limitations of the Study: What the Woozle Ignores

One of the fundamental features of a woozle is that it ignores or minimizes the limitations of those studies on which it is founded. Even when the researchers themselves have pointed out the limitations of their study, the woozle ignores them. Since the publication of the report in which the preschooler study first appeared (McIntosh et al., 2010), a number of social scientists have noted the study's shortcomings and have cautioned against generalizing its results or using its data as the basis for parenting plan recommendations (Cashmore & Parkinson, 2011; Lamb, 2012b; Ludolph & Dale, 2012; Nielsen, 2013a; Nielsen, 2013b; Parkinson & Cashmore, 2011; Pruett et al., 2012; Warshak, 2012). Understanding these limitations helps us appreciate how large the gap is between the woozle and the actual data in the study.

To begin, the preschooler study was limited by the sample, the sample sizes, and its atypical definition of shared care for infants. Most of these parents had never been married to one another (90% for infants and 60% for toddlers) and 30% of the infants' parents had never even lived together. This means the findings should not be generalized to the general population of divorced parents. And in contrast to all other studies where shared care/shared parenting is defined as 35% to 50% time sharing, this study categorized the 48 infants who spent as few as four nights a month in their father's care as being in shared care. The researchers did this because there were only 11 infants who actually were spending 35% or more time overnighing. As a result of this unusual way of categorizing the infants, there was no way to assess the impact of overnighing only once a week versus overnighing more frequently—and no way to assess the impact of shared care as it is always defined in the literature. Another limitation was that the number of overnighing infants was very small on many measures. For example, in the occasional overnight group, there were as few as 14 and no more than 20 infants measured on any of the six outcomes. Of greater concern and in contrast to the woozle's claim that overnighing as little as once a week had a negative impact, this study never compared the children who never overnighed to the children who only occasionally overnighed. That is, the study never addressed the question: Is occasional overnighing better or worse than never overnighing?

Further limiting the study, there was no established validity or reliability for four of the six measures: irritability, persistence, wheezing, and wariness/watchfulness about the mother's whereabouts (AIFS, 2012). Unfortunately without reported validity and reliability on these adapted versions of standardized measures, the data cannot be interpreted with any confidence. This problem is especially noteworthy because these are the four measures that form the basis of the woozle's claim that over-

nighting creates physical stress, emotional regulation difficulties, lack of persistence, and wariness/watchfulness in regard to the mother's presence.

The "visual monitoring scale" was created by the authors solely for this study (McIntosh et al., 2010) with no reported reliability or validity. The authors chose three questions from the Communication and Symbolic Behavior Scales (CSBS) that LSAC had used to assess infants' communication skills and readiness to learn language (Wetherby & Prizant, 2001). The mother was asked how often her infant: looked at her to see if she was watching, tried to get her attention when she was being inattentive, and tried to get her to notice or look at interesting objects without trying to get her to do anything with them (p. 94). The researchers used these three questions to assess how watchful and wary the infants were in their mothers' presence. Their rationale for choosing these three questions was that gazing frequently at the mother and trying to stay close to her were signs of insecurity and anxiety about the mother's emotional availability according to some attachment theorists (p. 115). On the CSBS, however, these three behaviors indicate that the infant has more highly developed ways of communicating and is readier to begin talking. In other words, the frequent overnighers were the most advanced. In contrast, the preschooler researchers concluded that because the frequent overnighers gazed and tried to get their mothers' attention more often, they were significantly stressed, were having to work harder to monitor her presence and had "an added degree of vulnerability" (McIntosh et al., 2010, p. 144). This interpretation is problematic on two counts. First, the three questions have never been established as valid or reliable measures of insecurity, anxiety, stress, or attachment. Second, there are reasons other than insecurity or stress why infants might engage in these three behaviors—one of which is being readier to learn to talk.

The second measure was the mother's yes or no answer to one question: Does your child wheeze at night more than four times a week? The LSAC researchers had used this question as part of a scale to assess health or sleep problems. The study's authors, however, used this one question as a measure of children's stress because they classified wheezing as a "psychosomatic" variable: "Higher rates of wheezing in the shared care group are congruent within the attachment/stress hypothesis" (McIntosh et al., 2010, p. 147). Further they assumed that the stress was caused by a "negative emotional environment" in the shared care families: "As outlined in the literature review, several studies confirm a link between a negative emotional family environment and onset of asthma and wheezing in infancy" (p. 147).

These assumptions and interpretations are questionable for several reasons. To begin, using a single question is not a valid or reliable method for assessing any factor (Carmines & McIver, 1981). "With a single measure of each variable, one can remain blissfully unaware of the possibility of measurement error, but in no sense will this make his inferences more valid" (Blalock, 1970, p. 111). Also, classifying wheezing as a psychosomatic reaction to infant stress is unwarranted for at least three reasons (Carmo, 2009; NCHS, 2010; Reyes, 2011). First, parents' reports are not reliable measures of children's wheezing. Indeed, infant wheezing can be difficult even for physicians to detect. Second, wheezing in and of itself is not a validated measure for assessing stress because wheezing can be caused by environmental, genetic, and physiological factors having nothing to do with stress or family dynam-

ics. Even the authors briefly acknowledged this fact: “Wheezing was independently predicted by low parental income” (McIntosh et al., 2010, p. 148).

Third, the link between wheezing and family stress is not as simple or as straightforward as implied, as evidenced by the three studies cited by the authors to support their hypothesis—none of which confirmed a significant link between family stress and wheezing. In the first study cited (Berz, 2007) the factors predicting asthma or wheezing for the 2- to 3-year-olds were: gestational age, the mother’s having asthma, the child’s being male, adults’ smoking in the home, parents not having social support, parent having seen violence in the neighborhood or family, and high maternal anxiety. These researchers pointed out, however, that highly anxious mothers may be overly sensitive to infants’ breathing difficulties, meaning we cannot determine whether mothers’ anxiety contributes to infants’ wheezing. In the second study cited (Shankardass, 2009) preschoolers were at greater risk for developing asthma if their mothers scored in the top quartile on a stress questionnaire. However, asthma was only more likely when the children were being exposed to traffic air pollution: “We observed little effect of stress in the absence of exposure to oxidant pollutants” (p. 12410). More important still, this study actually addressed the question: Is living in two homes associated with more asthma or wheezing? The answer was no. Residing in two homes was not linked to the children’s asthma or wheezing and had less impact than: people’s smoking in the home, living in a trailer or an apartment, and having a pet, cockroaches, mildew, or bedroom carpet in the home. In the third study cited (Klennert, Kaugars, Strand, & Silveira, 2008) in which all of these 4-year-olds were at risk for developing asthma because they had been diagnosed by doctors with wheezing illnesses as infants, the authors concluded, “The contribution of the family stress composite was attenuated when other variables were taken into account” (p. 51). In sum, using mothers’ reports on one question about wheezing as an indication of infant stress, and then attributing that stress to a negative emotional environment in shared care families—a variable that was never assessed in the study—is unwarranted.

The fourth and fifth measures, the irritability scale and the persistence scale, also had problems related to validity and interpretation. The irritability scale only had an alpha of .57 (Sanson & Mission, 2005), which is considered “questionable” reliability (George & Mallery, 2003). No reliability or validity was reported for the persistence scale (Sanson, Prior, & Garino, 1987). Moreover, the persistence and the irritability scores are difficult to interpret as “good” or “bad” because the scales provide no way to differentiate healthy/normal scores from unhealthy/abnormal ones. Equally important, although the researchers interpreted irritability and lower persistence as signs of the child’s inability to regulate emotions, other interpretations are equally plausible, among them: intestinal problems such as colic, attention deficit disorders, or the baby’s difficult temperament. In short, the irritability and persistence scales were not validated measures for assessing infant stress, or developmental problems, or emotional regulation difficulties. It is also worth noting that these measures were based entirely on the mothers’ reports, even though the researchers have reported elsewhere that these data came from independent observers’ reports of the babies’ general day to day behavior (McIntosh & Smyth, 2012, p. 178).

Again, these shortcomings do not mean the study should be dismissed. All studies have shortcomings. Then too, these authors had no control over the lack of validity and reliability for the measures used by LSAC. The point is that the woozle overlooks this study’s limitations. As Warshak (2012) stated, “It is somewhat surprisingly that this heavily flawed study from Australia is being raised in serious debates about family law reform” (p. 12). Likewise, other scholars have concluded that the study made only a limited contribution to the debate on overnighting (Parkinson & Cashmore, 2011). Lamb, an internationally recognized expert on early childhood development, also concurred that the study was relatively insignificant given the statistical insignificance and ambiguity of most of the findings (Lamb, 2012b). To be more blunt, other scholars have stated that this study should never have been used to make policy recommendations cautioning against overnighting (Ludolph & Dale, 2012).

The Data Versus the Wozzle

One defining hallmark of a woozle is reporting and exaggerating some findings while ignoring others. The question, therefore, is how much of a discrepancy exists between the actual data from the study and the woozle: Overnighting even as little as once a week increases infants and toddlers’ problems in regard to: irritability, persistence at tasks, stress induced wheezing, behavioral and emotional regulation problems, and distressed behavior and insecure attachments to their mothers.

First and foremost, there were no significant differences between overnighting and nonovernighting infants on four of the six measures of well-being: their mothers’ concerns about the infants’ development, overall physical health, wheezing, and negative responses to strangers. Second, there were no consistent relationships between overnighting and the outcomes on any of the measures other than persistence at tasks. Third, in regard to trying to get their mothers’ attention (which the researchers interpreted negatively as being watchful and wary), the infants who frequently overnighted were no different from infants who occasionally overnighted. Fourth, not only were frequent overnighters not more whiny and irritable than infants who never overnighted, they had exactly the same mean irritability score as infants living in intact families. Because these researchers were interpreting irritability as a sign of poor stress regulation related to insecure attachment, this would mean that most Australian infants from intact families also had insecure attachment and emotional/stress regulation problems. In short, there appears to be a “whining woozle” when the data are presented as if frequent overnighting contributes to abnormally high levels of irritability.

Ignoring these findings, the woozle focuses solely on the three negative outcomes for the frequently overnighting infants—outcomes that largely failed to show consistent relationships. First, for irritability, the 43 frequent overnighters were more irritable than the 14 occasional overnighters—but not more than the 115 who never overnighted. Second, for wheezing (interpreted as a psychosomatic reaction to stress), the 38 frequent overnighters wheezed more ($p = .08$, approaching but not achieving significance) than the 18 occasional overnighters—but again, not more than the 121 who never overnighted. Third, for gazing and trying to get their mothers’ attention (interpreted as signs of insecurity and anxiety), the 59 frequent overnighters gazed and sought attention more often

than the 141 infants who never overnights—but again, not more than the 18 infants who occasionally overnights. In short, there was no clear connection between overnights and wheezing, irritability, and attention seeking—all of which were based on measures with no reported reliability or validity.

Similar patterns emerged for the 2- and 3-year-olds. There were no differences between the frequent and the occasional overnights on three of the seven measures: emotional functioning, conflict with caregivers, negative responses to stranger. On overall health, the frequent overnights were healthier than the nonovernights. Likewise, on wheezing (interpreted as a sign of stress) the frequent overnights had better outcomes than both the occasional and the nonovernights. Completely ignoring these positive data, the wheezing woosle focuses instead on the less significant negative finding ($p = .08$) for the infants: the 38 frequent overnights wheezed more often than the 18 occasional overnights.

Moreover, the 2- to 3-year-olds did not have more problems interacting with their peers or in overall social adjustment (McIntosh et al., 2010, p. 137). Their difficult behavior was limited to their interactions with their mothers. The researchers interpreted this finding negatively: “Of concern, but as predicted by attachment theory, they also showed severely distressed behaviors in their relationship with the primary parent” (McIntosh et al., 2010, p. 9). In fact, however, these types of behaviors were relatively common in the general population of Australian children. In the LSAC survey from which the preschooler data were taken, 4,400 mothers reported that 50% of their 2- to 3-year-olds cried, whined and hung onto her when she tried to leave, 50% sometimes refused to eat, and 40% often got very upset with her. According to the preschooler researchers, this would mean that half of all Australian toddlers were exhibiting “severely distressed behaviors” due to attachment distress with their mothers. Equally important, the frequent overnights’ mean score (32.82) on the behavioral problems scale was well within the normal range (scores > 36 = high/abnormal; Smart, 2010), meaning they were not “severely distressed.” In other words, babies and toddlers who frequently overnights were no more irritable and no more difficult with their mothers than infants and toddlers in married families. Given this, drawing negative conclusions about shared care parenting plans based on these two measures is unwarranted.

It is true, however, that the 19 frequent overnights had worse scores on the five item persistence scale than the toddlers who occasionally or never overnights. This finding is worth noting as long as several limitations are kept in mind. First, this five item scale that was adapted from a longer standardized scale has no reported validity or reliability; therefore, it is not clear what is being measured. Second, there is no way to interpret these scores because the scale does not provide a way to differentiate healthy/normal scores from unhealthy/abnormal ones. In other words, there is no way of knowing whether the shared care children’s mean score ($\bar{X} = 3.93$) indicated that they had any more significant or more noticeable problems than the toddlers with rare overnights ($\bar{X} = 4.24$) or with occasional overnights ($\bar{X} = 4.13$). Without knowing whether the shared care children’s mean was within a normal range, there is no basis for contending that shared care has a more negative impact than the other parenting plans.

Despite these limitations, we will now see that the study ended up being presented and perceived as valid, reliable, and unequivocal evidence to support the woosle.

Evidence by Citation: “Reviews” of the Research

As previously explained, a woosle often begins when one or two studies are repeatedly cited as if they represented all, or almost all, of the research on a particular topic—and when those few studies are then used as the basis for policy recommendations. Shortly after the preschooler study was published in May, 2010, two articles (Fehlberg, Smyth, Maclean, & Roberts, 2011b; Trinder, 2010) purporting to be general reviews of the research on children of all ages in shared parenting families (referred to as shared care/shared residence in these articles) and one (Rathus, 2010) claiming to “examine the contemporary social science literature” (Rathus, 2010, p. 165) were published. It should also be noted that the second author of the Fehlberg et al. (2011b) paper was the second author of the preschooler study. The three articles made custody law recommendations for all children—not just for children under the age of 5 years. All three articles included the preschooler study, while none included more than five of the other 28 empirical studies that had compared the outcomes for children in shared parenting families to children in sole physical custody families. In this way, the preschooler study was given more attention and disproportionate weight in regard to custody recommendations than the other 23 studies. Rather than basing their recommendations on the 28 studies that had compared the outcomes for the children in primary care and in shared parenting families, the authors cherry-picked only those few studies that supported their recommendation against shared parenting legislation.

The first article (Fehlberg et al., 2011b) recommended that the British parliament not enact laws that would prioritize shared time over other parenting arrangements—a recommendation the authors reiterated in a policy paper (Fehlberg, Smyth, Maclean, & Roberts, 2011a). The section on young children (p. 8) reported only the negative data from the preschooler study, ignoring the fact that there were no differences on most measures, and never mentioning the better outcomes for the shared care children on several outcomes. The article also ignored Pruett’s (2004) study that found equal or better outcomes for infants and toddlers who overnights and failed to mention that the Solomon and George study (1999) found no differences in attachments between the overnights and the nonovernights infants. The second article (Trinder, 2010) also advocated against shared parenting legislation in the United Kingdom. As with the Fehlberg article, the section on “younger children” (pp. 491–492) reported only the negative data from the preschooler study, entirely ignored Pruett’s study (Pruett et al., 2004) and mistakenly reported the Solomon and George (1999) study as having found higher rates of insecure attachment in infants who overnights. Likewise the third article (Rathus, 2010) concluded that the 2006 custody law reforms in Australia were ill-advised for two reasons. First “the reforms were driven by fathers’ rights groups” (p. 164). Second “shared time orders have created a ‘lego-science’ that shared parenting is almost always good for children, but this lego-science is a pseudoscience which is not consistent with the complex reported social science about shared parenting” (p. 164).

In sum, within a short period of time the hallmarks of a woosle were emerging: putting considerable emphasis on only one or two studies to the exclusion of the others and making policy recommendations on the basis of only that portion of the available data that could be used to advocate for a particular position—in this

case, to advocate against shared parenting legislation for children of all ages and to advocate against overnighting for infants and toddlers.

Misrepresentations of Similar Studies

Another situation that contributes to the creation of a wozzle is claiming that several studies reached the same conclusion, when in fact they did not. This makes it appear as if the wozzle is based on a wider base of empirical evidence than is actually the case. In that regard, the *Solomon and George study (1999)* and the preschooler study are often cited together as having reached similar conclusions about infant overnighting (McIntosh, 2011c; McIntosh, 2011f; McIntosh, 2012a; McIntosh, 2012c; McIntosh, Burke, Dour, & Gridley, 2009). As previously explained, however, *Solomon and George (1999)* concluded that there were no significant differences in attachment classifications between the overnighters and nonovernighters, regardless of frequency of overnighting. Moreover, *Solomon and George* concluded that the overnighters' having more disorganized (unclassifiable) attachments than the infants in married families (but not more disorganized than infants who did not overnight) was due to the negative characteristics of their parents' relationship, not to the overnighting.

Wozzle Fertilizers: From Academia to Media

The Media

One of the richest fertilizers for a wozzle is repeated and widespread exposure over an extended period of time—especially in the media and especially when the topic is a controversial one. The preschooler study illustrates this pattern. In the years before the study was released in 2010, Australians were debating whether to reform their custody laws in ways that would be more supportive of shared parenting (referred to as “shared care” in Australia when children live with their fathers more than 35% of the time). In 2006 these controversial reforms were enacted, but the debates continued. This is important because, as already noted, wozzles are more likely to arise when the public has strong feelings about the controversial issues underlying them.

The lead author of the preschooler study was often quoted—correctly or incorrectly—as saying that research showed that shared care for preschoolers and overnighting for infants and toddlers had a deleterious impact on children. It was not clear what research McIntosh was referring to in some of her older interviews. For example, in “*Trouble Ahead for Babies of Divorce*” the article began: “The majority of babies who live alternately with their divorced parents develop long-lasting psychological problems, new research has found. Such arrangements cause enduring disorganized attachment in 60% of infants under 18 months, says clinical psychologist and family therapist, Jennifer McIntosh” (Martin, 2003, p. 1). In later interviews, however, McIntosh was specifically referring to the preschooler study (Horin, 2010; “*Infants Struggle in Shared Care*,” 2010). Although some reporters may not have accurately represented what was said to them, there was nonetheless a consistency in what they reported (Biggs, 2009; Clinton, 2008; Kissane, 2007). More recently, after interviewing McIntosh about the preschooler study, the interviewer wrote that shared care was a “developmental disaster” and that attachment

studies “from around the world” showed babies cannot cope with a change of their primary caregiver without suffering physical and psychological problems (Jackman, 2010). Illustrating how grossly distorted data can become, one reporter wrote that there were indications of “violent behavior” in the shared care toddlers (Diwan, 2010). In and of themselves, media reports cannot create a wozzle. But in combination with other factors, the media can prime the public to accept wozzles.

Academic Journals and Conferences

Along with the media exposure, the study received considerable attention in academic journals and at conferences. The largest organization for family court professionals, the Association of Family and Conciliatory Courts (AFCC), put McIntosh in charge of editing a special issue on attachment, which included recommendations on parenting plans for infants and toddlers (McIntosh, 2011a). Many of the statements in her introductory summary reinforced the conclusions of the preschooler study and the particular version of attachment theory on which it relied. Among these conclusions were: “Overnight care is not essential to an infant or child’s ability to form a healthy attachment to the second parent.” “All contributors agreed on the essential role of a “primary” attachment figure in the first year or two of life.” “In normal development, the female brain is specifically equipped for the largely nonverbal, affiliative, nurturant aspects of attachment formation with an infant.” “Overnight stays away from the primary caregiver in early infancy are generally best avoided, unless of benefit to the primary caregiver (McIntosh, 2011a, p. 423). McIntosh (2011a) reassured readers that she had presented a balanced and thorough overview of the current research: “Anyone in the know about attachment will agree: this is a stellar, comprehensive lineup of experts” (p. 421).

Many scholars, however, did not agree with the theoretical perspectives or the conclusions in the special edition and also expressed their concerns about the preschooler study itself (Garber, 2012; Hynan, 2012; Lamb, 2012a; Ludolph, 2012). Their primary criticisms were that McIntosh chose to include only those researchers who agreed with her points of view and who thereby endorsed the preschooler study, that current research on attachment had been ignored, and that the recommendations against overnighting far over reached the empirical data. In response, McIntosh replied, “Although some may want to continue to shoot me as the messenger, I stand by this special issue for the answers it offers at this point in time, while recognizing that some questions it raises may ultimately prove more important” (McIntosh, 2012c, p. 500). Likewise, in response to another critique (Parkinson & Cashmore, 2011), neither of the lead authors of the preschooler study acknowledged the validity of any of the criticisms (Smyth, McIntosh, & Kelaher, 2011).

Receiving further attention, the preschooler study was the focus of the plenary address that McIntosh and George (coauthor of the study with Judith Solomon) presented at the Association of Family and Conciliation Courts (AFCC) national conference in 2012, which was attended by more than 1,000 people (McIntosh, 2012b). In contrast to the earlier summaries of the study with Solomon, George now stated that their study reached the same conclusion as the preschooler study: Overnighting interferes with infants’ attachments to their mothers. McIntosh then mistakenly stated that

Pruett's (Pruett et al., 2004) study had reached similar conclusions to their two studies: "To cut a long story short, we took these findings, looked at the other studies, saw a pattern" (p. 5). As previously explained, however, Pruett did not find significant differences between the overnighting and the nonovernighting two to three year-olds (Pruett et al., 2004). Further, McIntosh stated: "There have been attempts throughout the field to polarize us and our studies" (p. 3). "We have found the purpose, designs and findings of our respective studies twisted beyond recognition, and motivations and intent attributed to us that defie belief" (p. 4). Given her concerns about the woozling of their data, it is unfortunate that McIntosh inadvertently may have misled the audience to believe that thousands of overnighting children had been in the preschooler study, when in fact there were as few as 14 children in some of the groups: "We explored a large randomly selected general population dataset. This amounts to 10,000 children 0–5 years" (p. 4).

Throughout 2011 and 2012 the study's findings were further disseminated through international seminars. These included the lead author's presentation to the New Zealand Psychological Society (McIntosh, 2010a), her video on shared parenting for the Minnesota Bar Association, an interview for their newsletter (Jeske, 2011; Waggoner, 2011), a seminar hosted by the Guardian Ad Litem Association in Massachusetts (McIntosh, 2011d), and a seminar in London hosted by Liz Trinder who had written the "research review" article advocating against shared parenting custody reform in the United Kingdom. The seminar was sponsored by the Nuffield Foundation, which had published reports and coauthored letters to the Prime Minister opposing custody reform (CYPFD, 2012). The brochure stated that the seminar was "based on the highest quality research evidence available internationally." "McIntosh is widely acknowledged as the leading international expert on the effects on children of shared care" (McIntosh, 2011e, p. 1). There is certainly nothing unprofessional about researchers' presenting their data to audiences around the world. Disseminating data is commendable as long as the data are not being presented in a way that gives an unbalanced view of the literature or that advocates for a particular position that is not supported by the literature. But in regard to what the woozle was claiming about overnighting and about shared parenting, the problem was that the other six studies that had included children under the age of 5 years (two of which focused exclusively on children as young as the children in the preschooler study) were not receiving this type of public and international attention.

The Woozle's Emotional Hook

As explained earlier, presenting case studies, hypothetical situations, and anecdotal stories that the audience might misperceive as being representative of the general body of research can contribute to a woozle. For example, in a 2-day seminar in Australia with McIntosh, George (2012) offered a hypothetical example of a child in shared care. The child, Frankie, was being taken care of every week by a cadre of adults: both parents, four grandparents, two sets of stepparents/partners, the staff in two different day care centers (because the parents could not agree on a day care center) and the tot care staff at church (p. 13). By providing such an atypical and negative example, George might have inadvertently led her audience to believe that this was the typical situation for

most preschoolers in shared care families. Moreover, this hypothetical example directly contradicted the empirical data from Pruett's (Pruett et al., 2004) study: Having multiple caretakers was not related to negative outcomes for infants or toddlers—and was, in fact, related to even better outcomes for girls. Similarly, McIntosh wrote an article for the AFCC newsletter that reaches thousands of family court professionals—a story about a teenage mother (that McIntosh had met by accident in a train station) who was ordered by the court to have her 1-year-old baby live on alternate weeks with its father (McIntosh, 2010b). Although such anecdotal stories and case studies are compelling, Emery (2005) is among those social scientists who caution: "We all have to recognize and admit that clinical experience, including case studies, *prove nothing*" (pp. 9–10). And as explained earlier, anecdotal stories and dramatic case studies can trigger emotional responses that threaten to override critical thinking and empirical data.

The Impact of the Woozle

Through many pathways over recent years, the preschooler study has morphed into the woozle: infant or toddler overnighting and shared parenting for preschoolers have a deleterious impact on infants and other children under the age of 4 years. But is there any evidence that this particular woozle has had any impact on public policies or public opinion? The answer appears to be yes.

In Australia the report containing the preschooler study and a second study with older children was delivered to Attorney General Robert McClelland in May, 2010. Six months later he cited the report as part of the "strong evidence base" for his proposed amendment to revoke the 2006 shared parenting laws (Jackman, 2010). Just weeks before the national elections, Fehlberg, whose review of the research article had largely excluded all studies except the preschooler study, also spoke out against the 2006 custody law reforms in Sydney's *Morning Herald* (Fehlberg, 2010). In the same year, the study was also presented at the national conference of the Australian Family Law Association (McIntosh, 2010a).

The study also had an impact on three influential organizations in Australia: the Australian Psychological Society, the Association for Infant Mental Health, and the National Council for Children Post Separation (2013). All three recommended or warned against overnighting for infants and shared care for other children under the age of four, citing only two empirical studies: the preschooler study and the study by Solomon and George (1999). McIntosh was the lead author of the infant overnight care paper (McIntosh, 2011c) which was the background paper for the AAIMH guidelines (AAIMH, 2011) and was lead author of the position statement paper for the Australian Psychological Society (McIntosh et al., 2009). Many of the statements in these documents were similar to statements that McIntosh made one year later in the special issue of *Family Court Review*—statements that other scholars criticized for misrepresenting and overreaching the research, as previously discussed (McIntosh, 2011a). The Infant Mental Health guidelines were disseminated by the Australian media (Griffin, 2011; Overington, 2011), as well as by law firms' web sites that warned against overnighting and shared care (Magee, 2010; O'Loughlin, 2011).

In the United States the study has also had an impact—in some instances, an impact limited to recommendations against over-

nighting for infants and toddlers, but, in others, extending to custody recommendations for children of all ages. Among the articles citing the preschooler study as the basis for warning against overnighting and shared parenting for children under the age of four were: an article in the *Huffington Post* by a professor of human development (Hughes, 2011), another in the Minnesota Bar Association's newsletter (Jeske, 2011), and another in the *Wisconsin Journal of Family Law* (Zirkel, 2012). An article in the *Maryland Bar Association Journal* cited only two studies in expressing its opposition to legal presumptions of shared parenting for children of all ages—one being the preschooler study (Fait, Wills, & Borenstein, 2012). The “no overnighting” message has also been posted on at least one national parenting web site (Markham, 2013).

The study also has had an impact in some states on proposed shared parenting legislation, as well as on overnight parenting plans for the very youngest children. In Oregon the legislative advisory committee's report on custody reform recommended against considering a shared parenting bill. The “Summary of current information and research” report included only four of the 28 available empirical studies on outcomes for children in shared parenting families—one of which was the preschooler study (Scher & Vien, 2011). Likewise, the Minnesota Matrimonial Lawyers Association, after having watched a taped presentation by McIntosh at their conference, concluded that overnighting for infants and toddlers was ill advised (“Splitting the Baby,” 2011). The taped presentation was also discussed by members of the Minnesota Family Law Association (Waggoner, 2011). More recently in Alabama, a children's advocacy organization presented a series of public seminars throughout the state, explaining their legislative priorities for 2014—one of which is to oppose the proposed shared parenting legislation. One of the handouts states: “Neuroscience shows that consistency is critical especially for young children (0–3) and the developing brain. Moving from place to place, even when there are two loving and fit parents, is not good for young children” (Voices, 2013, p. 6). The one source cited as the basis for the handout was the article about the preschooler study, “Infants Struggle in Shared Care” (2010), posted on the web site of an Australian university where the lead author is an adjunct teacher.

Moving beyond the United States, in Israel during the time the government was holding legislative meetings about reforming custody laws, McIntosh was the keynote speaker at a video conference sponsored by female leaders at Bar Ilan University's gender studies program (Whiston, 2012). What McIntosh actually said in her speech and whether the video was ever used to try to persuade legislative committees to vote against shared parenting custody laws is known only to the people involved. But regardless of its intent or its content, the presentation was interpreted as supporting the wozzle: Infants and toddlers should spend little, if any, overnight time with their fathers and women, unlike men, have brains that are “hard wired” to form the primary attachment and to communicate with infants. The ire aroused by the speech was evident in headlines such as this on the Internet: “Australian male bashing guru Jennifer McIntosh calls Israel to avoid shared parenting” (“Australian Male Bashing,” 2012). Many scholars and policymakers were concerned enough about the possible impact of the seemingly one-sided presentation of current research that they

invited Warshak (2012) to present a balanced overview of the literature relevant to parenting plans for very young children.

Likewise, in the United Kingdom the study has played a role in current debates over custody reform. The committee that was assigned to make custody reform recommendations to the British Parliament (Norgrove, 2011) cited only three of the 28 studies that had compared outcomes for shared parenting children and for other children with separated parents. The preschooler study was one of the three (Rhoades, 2011). The committee recommended that Parliament not consider shared parenting legislation: “Drawing on international and other evidence we oppose legislation to encourage shared parenting. The detailed information from Australia showed the damaging consequences for many children” (p. 138). Trinder, who was well acquainted with the preschooler study because she had hosted McIntosh's 2011 seminar in London, (McIntosh, 2011e), also provided a consultation response to the committee, stating her approval of their decision and claiming it was consistent with the research (Norgrove, 2011, p. 138). Even more recently in a letter to the prime minister, the directors of eight counseling and advocacy centers voiced their opposition to shared parenting legislation, all citing the preschooler study without citing any of the other 28 studies (CYPFD, 2012). This is not to say the preschooler study was the pivotal factor in these policy recommendations. But because it was cited in all of these documents to the exclusion of almost all of the other studies that have examined outcomes for children in shared parenting families, it serves as yet another example of the extent to which the preschooler study was being presented internationally to policymakers.

In sum, as is characteristic of wozzles, the findings from the preschooler study seem to have grown larger and to have become more significant with the passage of time, while its limitations seem to have all but disappeared from view.

How to Corral a Wozzle: Damage Control

Once a wozzle is on the loose, how can it be corralled? One approach is for researchers to point out the limitations of the data on which the wozzle is predicated. As already noted, a number of researchers have written about the limitations of the preschooler study. All of these critiques, however, have been published in academic journals—meaning they are unlikely to attract any public attention, let alone the attention of the media. Given this, a more effective approach might be to involve the media in disseminating the research that contradicts the wozzle. Likewise, researchers could share more of the research with those organizations and legislative committees whose reports or policy recommendations have been based on wozzled data.

Researchers whose studies are being used to support a wozzle can also take steps to limit or to repair the damage. By persistently and publicly correcting the misunderstandings of their data, they can counter some of the misleading reports in the media and in academic and professional settings. Likewise, they can respond to critiques of their work by de-personalizing the debates and welcoming academic disagreements, never attempting to interfere in any way with anyone's candid expressions of their views. In the same vein, willingly sharing seminar and conference materials reduces the odds of being misperceived as having contributed to the wozzling of one's own data. Authors can also refrain from using case studies and personal anecdotes or from presenting their

data in overly dramatic ways that can easily be misused by advocacy groups to promote a particular position. Finally researchers should exercise caution when reporting their data when their findings are not consistent with the existing body of research, or when there are still very few studies on the topic.

Authors of studies that have already been woozled—or studies that stand a good chance of becoming woozled because of their controversial findings—also need to be consistent and unambiguous when presenting their study's findings and when using their own data to support their own positions on matters of policy. Authors should ensure that their synopses, abstracts, summaries, speeches, and seminar materials consistently correspond to their study's full report and to the full analyses of their data. Likewise all of their published work and recommendations should be consistent with what they say in their seminars and at conferences. By sending conflicting or ambiguous messages to different audiences, researchers are equivocating in ways that may inadvertently fortify woozles based on their data. In contrast, by presenting the same summaries and making the same recommendations to all audiences, researchers reduce the chances of having their data distorted into woozles. Being clear and consistent also protects researchers from being perceived as being disingenuous or as intentionally woozling their own data. Likewise, researchers can protect their data from being woozled by realizing that whether they couch their comments as "advice," "recommendations," "guidelines," "contraindications," or "rules," they are likely to be perceived in the same way by the general public, practitioners and policymakers—even if experts and scholars are able to make these distinctions in nomenclature.

In closing, several points are worth repeating. First, the particular study presented in this article is only one of many studies that could be used to illustrate the process that leads to a woozle. I chose this particular study to illustrate how woozles are created and the impact they can have because this is an area where I am familiar with the research—and because the topic is currently in the forefront of worldwide debates on custody law reform, infant overnighting and shared parenting plans for the very youngest children. Second, no single person or no one event can be held responsible for the creation or the promotion of a woozle. A constellation of factors, including the media and advocacy groups, carry the woozle along its path. Finally, in regard to custody law reform and parenting plans, we need to ensure that all of the available data are widely disseminated to the public, policymakers, and practitioners. To do otherwise is to do a grave disservice to the millions of children whose parents are no longer living together. We want to be sure that, unlike Winnie the Pooh, we do not base our decisions or our opinions on a woozle.

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