

# **GUNS AND DOLLS**

By Laura Shapiro

Alas, our children don't exemplify equality any more than we did. Is biology to blame? Scientists say maybe--but parents can do better, too.

Meet Rebecca. She's 3 years old, and both her parents have full-time jobs. Every evening Rebecca's father makes dinner for the family--Rebecca's mother rarely cooks. But when it's dinner time in Rebecca's dollhouse, she invariably chooses the Mommy doll and puts her to work in the kitchen.

Now meet George. He's 4, and his parents are still loyal to the values of the '60s. He was never taught the word "gun," much less given a war toy of any sort. On his own, however, he picked up the word "shoot." Thereafter he would grab a stick from the park, brandish it about and call it his "shooter."

Are boys and girls born different? Does every infant really come into the world programmed for caretaking or war making? Or does culture get to work on our children earlier and more inexorably than even parents are aware? Today these questions have new urgency for a generation that once made sexual equality its cause and now finds itself shopping for Barbie clothes and G.I. Joe paraphernalia. Parents may wonder if gender roles are immutable after all, give or take a Supreme Court justice. But burgeoning research indicates otherwise. No matter how stubborn the stereotype, individuals can challenge it; and they will if they're encouraged to try. Fathers and mothers should be relieved to hear that they do make a difference.

Biologists, psychologists, anthropologists and sociologists have been seeking the origin of gender differences for more than a century, debating the possibilities with increasing rancor ever since researchers were forced to question their favorite theory back in 1902. At that time many scientists believed that intelligence was a function of brain size and that males uniformly had larger brains than women--a fact that would nicely explain men's pre-eminence in art, science and letters. This treasured hypothesis began to disintegrate when a woman graduate student compared the cranial capacities of a group of male scientists with those of female college students; several women came out ahead of the men, and one of the smallest skulls belonged to a famous male anthropologist.

Gender research has become a lot more sophisticated in the ensuing decades, and a lot more controversial. The touchiest question concerns sex hormones, especially testosterone, which circulates in both sexes but is more abundant in males and is a likely, though unproven, source of aggression. To postulate a biological determinant for behavior in an ostensibly egalitarian society like ours requires a thick skin. "For a while I didn't dare talk about hormones, because women would get up and leave the room," says Beatrice Whiting, professor emeritus of education and anthropology at Harvard. "Now they seem to have more self-confidence. But they're skeptical. The data's not in yet."

Some feminist social scientists are staying away from gender research entirely--"They're saying the results will be used against women," says Jean Berko Gleason, a professor of psychology at Boston University who works on gender differences in the acquisition of language. Others see no reason to shy away from the subject. "Let's say it were proven that there were biological foundations for the division of labor," says Cynthia Fuchs Epstein, professor of sociology at the City University of New York, who doesn't, in fact, believe in such a likelihood. "It doesn't mean we couldn't do anything about it. People can make from scientific findings whatever they want." But a glance at the way society treats those gender differences already on record is not very encouraging. Boys learn to read more slowly than girls, for instance, and suffer more reading disabilities such as dyslexia, while girls fall behind in math when they get to high school. "Society can amplify differences like these or cover them up," says Gleason. "We rush in reading teachers to do remedial reading, and their classes are almost all boys. We don't talk about it; we just scurry around getting them to catch up to the girls. But, where are the remedial

math teachers'? Girls are supposed to be less good at math, so that difference is incorporated into the way we live."

No matter where they stand on the question of biology versus culture, social scientists agree that the sexes are much more alike than they are different, and that variations within each sex are far greater than variations between the sexes. Even differences long taken for granted have begun to disappear. Janet Shibley Hyde, a professor of psychology at the University of Wisconsin, analyzed hundreds of studies on verbal and math ability and found boys and girls alike in verbal ability. In math, boys have a moderate edge; but only among highly precocious math students is the disparity large. Most important, Hyde found that verbal and math studies dating from the '60s and '70s showed greater differences than more recent research. "Parents may be making more efforts to tone down the stereotypes," she says. There's also what academics call "the file-drawer effect." "If you do a study that shows no differences, you assume it won't be published," says Claire Etaugh, professor of psychology at Bradley University in Peoria, Ill. "And until recently, you'd be right. So you just file it away."

The most famous gender differences in academics show up in the annual SAT results, which do continue to favor boys. Traditionally they have excelled on the math portion, and since 1972 they have slightly outperformed girls on the verbal side as well. Possible explanations range from bias to biology, but the socioeconomic profile of those taking the test may also play a role. "The SAT gets a lot of publicity every year, but nobody points out that there are more women taking it than men, and the women come from less advantaged backgrounds," says Hyde. "The men are a more highly selected sample: they're better off in terms of parental income, father's education and attendance at private school."

Another longstanding assumption does hold true: boys tend to be somewhat more active, according to a recent study, and the difference may even start prenatally. But the most vivid distinctions between the sexes don't surface until well into the pre-school years. "If I showed you a hundred kids aged 2, and you couldn't tell the sex by the haircuts, you couldn't tell if they were boys or girls," says Harvard professor of psychology Jerome Kagan. Staff members at the Children's Museum in Boston say that the boys and girls racing through the exhibits are similarly active, similarly rambunctious and similarly interested in model cars and model kitchens, until they reach first grade or so. And at New York's Bank Street preschool, most of the 3-year-olds clustered around the cooking table to make banana bread one recent morning were boys. (It was a girl who gathered up three briefcases from the costume box and announced, "Let's go to work.")

By the age of 4 or 5, however, children start to embrace gender stereotypes with a determination that makes liberal-minded parents groan in despair. No matter how careful they may have been to correct the disparities in "Pat the Bunny" ("Paul isn't the only one who can play peek-a-boo, Judy can play peek-a-boo"), their children will delight in the traditional male/female distinctions preserved everywhere else: on television, in books, at day care and preschool, in the park and with friends. "One of the things that is very helpful to children is to learn what their identity is," says Kyle Pruett, a psychiatrist at the Yale Child Study Center. "There are rules about being feminine and there are rules about being masculine. You can argue until the cows come home about whether those are good or bad societal influences, but when you look at the children, they love to know the differences. It solidifies who they are."

### **Water pistols**

So girls play dolls, boys play Ghostbusters. Girls take turns at hopscotch, boys compete at football. Girls help Mommy, boys aim their water pistols at guests and shout, "You're dead!" For boys, notes Pruett, guns are an inevitable part of this developmental process, at least in a television-driven culture like our own. "It can be a cardboard paper towel holder, it doesn't have to be a miniature Uzi, but it serves as the focus for fantasies about the way he is going to make himself powerful in the world," he says. "Little girls have their aggressive side, too, but by the time they're socialized it takes a different form. The kinds of things boys work out with guns, girls work out in terms of relationships--with put-

downs and social cruelty." As if to underscore his point, a 4-year-old at a recent Manhattan party turned to her young hostess as a small stranger toddled up to them. "Tell her we don't want to play with her," she commanded. "Tell her we don't like her."

Once the girls know they're female and the boys know they're male, the powerful stereotypes that guided them don't just disappear. Whether they're bred into our chromosomes or ingested with our cornflakes, images of the aggressive male and the nurturant female are with us for the rest of our lives. "When we see a man with a child, we say, 'They're playing'," says Epstein. "We never say, 'He's nurturant'."

The case for biologically based gender differences is building up slowly, amid a great deal of academic dispute. The theory is that male and female brains, as well as bodies, develop differently according to the amount of testosterone circulating around the time of birth. Much of the evidence I rests on animal studies showing, for instance, that brain cells from newborn mice change their shape when treated with testosterone. The male sex hormone may also account for the different reactions of male and female rhesus monkeys, raised in isolation, when an infant monkey is placed in the cage. The males are more likely to strike at the infant, the females to nurture it. Scientists disagree--vehemently--on whether animal behavior has human parallels. The most convincing human evidence comes from anthropology, where cross-cultural studies consistently find that while societies differ in their predilection toward violence, the males in any given society will act more aggressively than the females. "But it's very important to emphasize that by aggression we mean only physical violence," says Melvin Konner, a physician and anthropologist at Emory University in Atlanta. "With competitive, verbal or any other form of aggression, the evidence for gender differences doesn't hold." Empirical findings (i.e., look around you) indicate that women in positions of corporate, academic or political power can learn to wield it as aggressively as any man.

Apart from the fact that women everywhere give birth and care for children, there is surprisingly little evidence to support the notion that their biology makes women kinder, gentler people or even equips them specifically for motherhood. Philosophers--and mothers, too--have taken for granted the existence of a maternal "instinct" that research in female hormones has not conclusively proven. At most there may be a temporary hormonal response associated with childbirth that prompts females to nurture their young, but that doesn't explain women's near monopoly on changing diapers. Nor is it likely that a similar hormonal surge is responsible for women's tendency to organize the family's social life or take up the traditionally underpaid "helping" professions--nursing, teaching, social work.

Studies have shown that female new-borns cry more readily than males in response to the cry of another infant, and that small girls try more often than boys to comfort or help their mothers when they appear distressed. But in general the results of most research into such traits as empathy and altruism do not consistently favor one sex or the other. There is one major exception: females of all ages seem better able to "read" people, to discern their emotions, without the help of verbal cues. (Typically researchers will display a picture of someone expressing a strong reaction and ask test-takers to identify the emotion.) Perhaps this skill--which in evolutionary terms would have helped females survive and protect their young--is the sole biological foundation for our unshakable faith in female selflessness.

Infant ties: Those who explore the unconscious have had more success than other researchers in trying to account for male aggression and female nurturance, perhaps because their theories cannot be tested in a laboratory but are deemed "true" if they suit our intuitions. According to Nancy J. Chodorow, professor of sociology at Berkeley and the author of the influential book "The Reproduction of Mothering," the fact that both boys and girls are primarily raised by women has crucial effects on gender roles. Girls, who start out as infants identifying with their mothers and continue to do so, grow up defining themselves in relation to other people. Maintaining human connections remains vital to them.

Boys eventually turn to their fathers for self-definition, but in order to do so must repress those powerful infant ties to mother and womanhood. Human connections thus become more problematic for them than for women. Chodorow's book, published in 1978, received national attention despite a dense, academic prose style; clearly, her perspective rang true to many.

Harvard's Kagan, who has been studying young children for 35 years, sees a different constellation of influences at work. He speculates that women's propensity for caretaking can be traced back to an early awareness of their role in nature. "Every girl knows, somewhere between the ages of 5 and 10, that she is different from boys and that she will have a child--something that everyone, including children, understands as quintessentially natural," he says. "If, in our society, nature stands for the giving of life, nurturance, help, affection, then the girl will conclude unconsciously that those are the qualities she should strive to attain. And the boy won't. And that's exactly what happens."

Kagan calls such gender differences "inevitable but not genetic," and he emphasizes--as does Chodorow--that they need have no implications for women's status, legally or occupationally. In the real world, of course, they have enormous implications. Even feminists who see gender differences as cultural artifacts agree that, if not inevitable, they're hard to shake. "The most emancipated families, who really feel they want to engage in gender-free behavior toward their kids, will still encourage boys to be boys and girls to be girls," says Epstein of CUNY. "Cultural constraints are acting on you all the time. If I go to buy a toy for a friend's little girl, I think to myself, why don't I buy her a truck? Well, I'm afraid the parents wouldn't like it. A makeup set would really go against my ideology, but maybe I'll buy one. It's very hard. You have to be on the alert every second."

In fact, emancipated parents have to be on the alert from the moment their child is born. Beginning with the pink and blue name tags for newborns in the hospital nursery--I'M A GIRL / I'M A BOY--the gender-role juggernaut is overwhelming. Carol Z. Malatesta, associate professor of psychology at Long Island University in New York, notes that baby girls' eyebrows are higher above their eyes and that girls raise their eyebrows more than boys do, giving the girls "a more appealing, socially responsive look." Malatesta and her colleagues, who videotaped and coded the facial expressions on mothers and infants as they played, found that mothers displayed a wider range of emotional responses to girls than to boys. When the baby girls displayed anger, however, they met what seemed to be greater disapproval from their mothers than the boys did. These patterns, Malatesta suggests, may be among the reasons why baby girls grow up to smile more, to seem more sociable than males, and to possess the skill noted earlier in "reading" emotions.

The way parents discipline their toddlers also has an effect on social behavior later on. Judith G. Smetana, associate professor of education, psychology and pediatrics at the University of Rochester, found that mothers were more likely to deal differently with similar kinds of misbehavior depending on the sex of the child. If a little girl bit her friend and snatched a toy, for instance, the mother would explain why biting and snatching were unacceptable. If a boy did the same thing, his mother would be more likely to stop him, punish him and leave it at that. Misbehavior such as hitting sexes peaks around the age of 2; after that, little boys go on to misbehave more than girls.

Psychologists have known for years that boys are punished more than girls. Some have conjectured that boys simply drive their parents to distraction more quickly; but as Carolyn Zahn-Waxler, a psychologist at the National Institute of Mental Health, points out, the difference in parental treatment starts even before the difference in behavior shows up. "Girls receive very different messages than boys," she says. "Girls are encouraged to care about the problems of others, beginning very early. By elementary school, they're showing more caregiver behavior, and they have a wider social network."

Children also pick up gender cues in the process of learning to talk. "We compared fathers and mothers reading books to children," says Boston University's Gleason. "Both parents used more inner-state words, words about feelings and emotions, to girls than to boys. And by the age of 2, girls are using more emotion words than boys." According to Gleason, fathers tend to use more directives ("Bring that

over here") and more threatening language with their sons than their daughters, while mothers' directives take more polite forms ("Could you bring that to me, please?"). The 4-year-old boys and girls in one study were duly imitating their fathers and mothers in that very conversational pattern. Studies of slightly older children found that boys talking among themselves use more threatening, commanding, dominating language than girls, while girls emphasize agreement and mutuality. Polite or not, however, girls get interrupted by their parents more often than boys, according to language studies--and women get interrupted more often than men.

Despite the ever-increasing complexity and detail of research on gender differences, the not-so-secret agenda governing the discussion hasn't changed in a century: how to understand women. Whether the question is brain size, activity levels or modes of punishing children, the traditional implication is that the standard of life is male, while the entity that needs explaining is female. (Or as an editor put it, suggesting possible titles for this article: "Why Girls Are Different.") Perhaps the time has finally come for a new agenda. Women, after all, are not a big problem. Our society does not suffer from burdensome amounts of empathy and altruism, or a plague of nurturance. The problem is men--or more accurately, maleness.

"There's one set of sex differences that's ineluctable, and that's the death statistics," says Gleason. "Men are killing themselves doing all the things that our society wants them to do. At every age they're dying in accidents, they're being shot, they drive cars badly, they ride the tops of elevators, they're two-fisted hard drinkers. And violence against women is incredibly pervasive. Maybe it's men's raging hormones, but I think it's because they're trying to be a man. If I were the mother of a boy, I would be very concerned about societal pressures that idolize behaviors like that."

Studies of other cultures show that male behavior, while characteristically aggressive, need not be characteristically deadly. Harvard's Whiting, who has been analyzing children cross-culturally for half a century, found that in societies where boys as well as girls take care of younger siblings, boys as well as girls show nurturant, sociable behavior. "I'm convinced that infants elicit positive behavior from people," says Whiting. "If you have to take care of somebody who can't talk, you have to learn empathy. Of course there can be all kinds of experiences that: make you extinguish that eliciting power, so that you no longer respond positively. But on the basis of our data, boys make very good baby tenders."

In our own society, evidence is emerging that fathers who actively participate in raising their children will be steering both sons and daughters toward healthier gender roles. For the last eight years, Yale's Pruett has been conducting a groundbreaking longitudinal study of 16 families, representing a range of socioeconomic circumstances, in which the fathers take primary responsibility for childcare while the mothers work full time. The children are now between 8 and 10 years old, and Pruett has watched subtle but important differences develop between them and their peers. "It's not that they have conflicts about their gender identity--the boys are masculine and the girls are feminine. They're all interested in the same things their friends are," he says. "But when they were 4 or 5, for instance, the stage at pre-school when the boys leave the doll corner and the girls leave the block corner, these children didn't give up one or the other. The boys spent time playing with the girls in the doll corner, and the girls were building things with blocks, taking pride in their accomplishments."

### **Little footballs**

Traditionally, Pruett notes, fathers have enforced sex stereotypes more strongly than mothers, engaging the boys in active play and complimenting the girls on their pretty dresses. "Not these fathers," says Pruett. "That went by the boards. They weren't interested in bringing home little footballs for their sons or little tutus for the girls. They dealt with the kids according to the individual. I even saw a couple of the mothers begin to take over those issues--one of them brought home a Dallas Cowboys sleeper for her 18-month-old. Her husband said, 'Honey, I thought we weren't going to do this, remember?' She said, 'Do what?' So that may be more a function of being in the second tier of parenting rather than the first."

As a result of this loosening up of stereotypes, the children are more relaxed about gender roles. "I saw the boys really enjoy their nurturing skills," says Pruett. "They knew what to do with a baby, they didn't see that as a girl's job, they saw it as a human job. I saw the girls have very active images of the outside world and what their mothers were doing in the workplace--things that become interesting to most girls when they're 8 or 10, but these girls were interested when they were 4 or 5."

Pruett doesn't argue that fathers are better at mothering than mothers, simply that two involved parents are better than "one and a lump." And it's hardly necessary for fathers to quit their jobs in order to become more involved. A 1965-66 study showed that working mothers spent 50 minutes a day engaged primarily with their children while the fathers spent 12 minutes. Later studies have found fathers in two-career households spending only about a third as much time with their children as mothers. What's more, Pruett predicts that fathers would benefit as much as children from the increased responsibility. "The more involved father tends to feel differently about his own life," he says. "A lot of men, if they're on the fast track, know a lot about competitive relationships, but they don't know much about intimate relationships. Children are experts in intimacy. After a while the wives in my study would say, 'He's just a nicer guy'."

Pruett's study is too small in scope to support major claims for personality development; he emphasizes that his findings are chiefly theoretical until more research can be undertaken. But right now he's watching a motif that fascinates him. "Every single one of these kids is growing something," he says. "They don't just plant a watermelon seed and let it die. They're really propagating things, they're doing salad-bowl starts in the backyard, they're breeding guinea pigs. That says worlds about what they think matters. Generativity is valued a great deal, when both your mother and your father say it's OK." Scientists may never agree on what divides the sexes; but someday, perhaps, our children will learn to relish what unites them.

- Pruett's groundbreaking study finds that two parents are better than 'one and a lump'
- Linguist Gleason says that by the age of 2, girls are using more words about feelings

*NEWBORNS: Girls' cribs have pink tags and boys' cribs have blue tags; mothers and fathers should be on the alert, for the gender-role juggernaut has begun*

*2-3 YEARS: Girls are encouraged to think about how their actions affect others; boys often misbehave, get punished and then misbehave again*

*4-5 YEARS: No matter what their parents do, girls and boys will enthusiastically embrace the male/female stereotypes they find all around them*

*6-7 YEARS: All children have to deal with aggression; girls wield relationships as weapons, while boys prefer to brandish water pistols.*

*9-10 YEARS: When girls talk among themselves, they tend to emphasize mutuality and agreement, while boys often try to command and dominate*

*BY LAURA SHAPIRO Newsweek Magazine*

### **SNAKES AND SNAILS AND PUPPY DOG TAILS**

*The male sex hormone testosterone strengthens muscles but threatens the heart.*

**Senses:** *Males are more sensitive to light, less sensitive to sound, than females. They have a worse sense of smell.*

**Bones:** *Males grow an average of 10 percent taller than females: male hormones promote growth of long bones; female hormones stop such growth at puberty.*

**Heart:** *Testosterone triggers production of low-density lipoprotein, which clogs blood vessels. Males have twice the risk of coronary heart disease as females.*

**Blood:** *Higher levels of stress hormones cause faster clotting, stronger heartbeat and higher blood pressure in males.*

## **SUGAR AND SPICE AND EVERYTHING NICE**

*The female sex hormones, especially estrogen, shape the brain as well as the body.*

**Brain:** *Women's language and other skills are more evenly divided between left and right hemisphere; in men, such functions are concentrated in the left brain.*

**Cardiovascular:** *Female hormones signal the liver to produce more "good" cholesterol; they also make blood vessels more elastic than males.'*

**Immune system:** *Estrogen strengthens the immune system, making females more susceptible to autoimmune disorders but more resistant to infection.*

**Fat:** *Grown females have about twice the body fat of males, most concentrated around breasts and hips. In men, it goes to the abdomen.*