

It could not have been easy being Elliott Roosevelt. If the alcohol wasn't getting him, the morphine was. If it wasn't the morphine, it was the struggle with depression. Then, of course, there were the constant comparisons with big brother Teddy.

In 1883, the year Elliott began battling melancholy, Teddy had already published his first book and been elected to the New York State assembly. By 1891—about the time Elliott, still unable to establish a career, had to be institutionalized to deal with his addictions—Teddy was U.S. Civil Service Commissioner and the author of eight books. Three years later, Elliott, 34, died of alcoholism. Seven years after that, Teddy, 42, became President.

Elliott Roosevelt was not the only younger sibling of an eventual President to cause his family heartaches—or at least headaches. There was Donald Nixon and the loans he wangled from billionaire Howard Hughes. There was Billy Carter and his advocacy on behalf of the pariah state Libya. There was Roger Clinton and his year in jail on a cocaine conviction. And there is Neil Bush, younger sib of both a President and a Governor, implicated in the savings-and-loan scandals of the 1980s and recently gossiped about after the release of a 2002 letter in which he lamented to his estranged wife, "I've lost patience for being compared to my brothers."

Welcome to a very big club, Bro. It can't be easy being a runt in a litter that includes a President. But it couldn't have been easy being Billy Ripken either, an unexceptional major league infielder craning his neck for notice while the press swarmed around Hall of Famer and elder brother Cal. It can't be easy being Eli Manning, struggling to prove himself as an NFL quarterback while big brother Peyton polishes a Super Bowl trophy and his superman stats. And you may have never heard of Tisa Farrow, an actress of no particular note beyond her work in the 1979 horror film *Zombie*, but odds are you've heard of her sister Mia.

Of all the things that shape who we are, few seem more arbitrary than the sequence in which we and our siblings pop out of the womb. Maybe it's your genes that make you a gifted athlete, your training that makes you an accomplished actress, an accident of brain chemistry that makes you a drunk instead of a President. But in family after family, case study after case study, the simple roll of the birth-date dice has an odd and arbitrary power all its own.

The importance of birth order has been known—or at least suspected—for years. But increasingly, there's hard evidence of its impact. In June, for example, a group of Norwegian researchers released a study showing that firstborns are generally smarter than any siblings who come along later, enjoying on average a three-point IQ advantage over the next eldest—probably a result of the intellectual boost that comes from mentoring younger siblings and helping them in day-to-day tasks. The second child, in turn, is a point ahead of the third. While three points might not seem like much, the effect can be enormous. Just 2.3 IQ points can correlate to a 15-point difference in sat scores, which makes an even bigger difference when you're an Ivy League applicant with a 690 verbal score going head to head against someone with a 705. "In many families," says psychologist Frank Sulloway, a visiting scholar at the University of California, Berkeley, and the man who has for decades been seen as the U.S.'s leading authority on birth order, "the firstborn is going to get into Harvard and the second-born isn't."

The differences don't stop there. Studies in the Philippines show that later-born siblings tend to be shorter and weigh less than earlier-borns. (Think the slight advantage the 6-ft. 5-in. [196 cm] Peyton Manning has over the 6-ft. 4-in. [193 cm] Eli doesn't help when he's trying to throw over the outstretched arms of a leaping lineman?) Younger siblings are less likely to be vaccinated than older ones, with last-borns getting immunized sometimes at only half the rate of firstborns. Eldest siblings are also disproportionately represented in high-paying professions. Younger siblings, by contrast, are looser cannons, less educated and less strapping, perhaps, but statistically likelier to live the exhilarating life of an artist or a comedian, an adventurer, entrepreneur, GI or firefighter. And middle children? Well, they can be a puzzle—even to researchers.

For families, none of this comes as a surprise. There are few extended clans that can't point to the firstborn, with the heir-apparent bearing, who makes the best grades, keeps the other kids in line and, when Mom and Dad grow old, winds up as caretaker and executor too. There are few that can't point to the lost-in-the-thickets middle-born or the wild-child last-born.

Indeed, to hear families tell it, the birth-order effect may only be getting stronger. In the past, girls were usually knocked out of the running for the job and college perks their place in the family should have accorded them. In most other ways, however, there was little to distinguish a first-, second- or third-born sister from a first-, second- or third-born brother. Now, with college and careers more equally available, the remaining differences have largely melted away.

"There are stereotypes out there about birth order, and very often those stereotypes are spot-on," says Delroy Paulhus, a professor of psychology at the University of British Columbia in Vancouver. "I think this is one of those cases in which people just figured things out on their own."

But have they? Stack up enough anecdotal maybes, and they start to look like a scientific definitely. Things that appear definite, however, have a funny way of surprising you, and birth order may conceal all manner of hidden dimensions—within individuals, within families, within the scientific studies. "People read birth-order books the way they read horoscopes," warns Toni Falbo, professor of educational psychology at the University of Texas. "I'm a middle-born, so that explains everything in my life—it's just not like that." Still, such skepticism does not prevent more and more researchers from being drawn to the field, and as they are, their findings, and the debate over them, continue to grow.

Humans aren't alone

If you think it's hard to manage the birth-order issues in your family, be thankful you're not an egret or an orange blossom. Egrets are not the intellectual heavyweights of the animal kingdom—or even the bird world—but nature makes them remarkably cunning when it comes to planning their families. Like most other birds, egrets lay multiple eggs, but rather than brooding them all the same way so that the chicks emerge on more or less the same day, the mother begins incubating her first and second eggs before laying the remaining ones in her clutch. That causes the babies to appear on successive days, which gives the first-arriving chick the earliest crack at the food and a 24-hour head start on growth. The second-hatched may not have too difficult a time catching up, but the third may struggle. The fourth and beyond will have the hardest go, getting pushed aside or even pecked to death if food, water and shelter become scarce. All that makes for a nasty nursery, but that's precisely the way the mother wants it. "The parents overproduce a bit," says Douglas Mock, professor of zoology at the University of Oklahoma, "maybe making one more baby than they can normally afford to raise and then letting it take the fall if the resource budget is limited."

Orange trees are even tougher on their young. A typical orange tree carries about 100,000 pollinated blossoms, each of which is a potential orange, complete with the seeds that are potential trees. But in the course of a season, only about 500 oranges are actually produced. The tree determines which ones make the cut, shedding the blossoms that are not receiving enough light or that otherwise don't seem viable. It is, for a tree, a sort of selective termination on a vast scale. "You've got 99% of the babies being thrown out by the parent," says Mock. "The tree just drops all the losers."

Even mammals, warm-blooded in metabolism and—we like to think—temperament, can play a similarly pitiless game. Runts of litters are routinely ignored, pushed out or consigned to the worst nursing spots somewhere near Mom's aft end, where the milk flow is the poorest and the outlook for survival the bleakest. The rest of the brood is left to fight it out for the best, most milk-rich positions.

Humans, more sentimental than birds, trees or litter bearers, don't like to see themselves as coming from the same child-rearing traditions, but we face many of the same pressures. As recently as 100 years ago, children in the U.S. had only about a 50% chance of surviving into adulthood, and in less developed parts of the world, the odds remain daunting. It can be a sensible strategy to have multiple offspring to continue your line in case some are claimed by disease or injury.

While the eldest in an overpopulated brood has it relatively easy—getting 100% of the food the parents have available—things get stretched thinner when a second-born comes along. Later-borns put even more pressure on resources. Over time, everyone might be getting the same rations, but the firstborn still enjoys a caloric head start that might never be overcome.

Food is not the only resource. There's time and attention too and the emotional nourishment they provide. It's not for nothing that family scrapbooks are usually stuffed with pictures and report cards of the firstborn and successively fewer of the later-borns—and the later-borns notice it. Educational opportunities can be unevenly shared too, particularly in families that can afford the tuition bills of only one child. Catherine Salmon, an assistant professor of psychology at the University of Redlands in Redlands, Calif., laments that even today she finds it hard to collect enough subjects for birth-order studies from the student body alone, since the campus population is typically overweighted with eldest sibs. "Families invest a lot in the firstborn," she says.

All of this favoritism can become self-reinforcing. As parental pampering produces a fitter, smarter, more confident firstborn, Mom and Dad are likely to invest even more in that child, placing their bets on an offspring who—in survival terms at least—is looking increasingly like a sure thing. "From a parental perspective," says Salmon, "you want offspring who are going to survive and reproduce."

Firstborns do more than survive; they thrive. In a recent survey of corporate heads conducted by Vistage, an international organization of CEOs, poll takers reported that 43% of the people who occupy the big chair in boardrooms are firstborns, 33% are middle-borns and 23% are last-borns. Eldest siblings are disproportionately represented among surgeons and M.B.A.s too, according to Stanford University psychologist Robert Zajonc. And a recent study found a statistically significant overload of firstborns in what is—or at least ought to be—the country's most august club: the U.S. Congress. "We know that birth order determines occupational prestige to a large extent," says Zajonc. "There is some expectation that firstborns are somehow better qualified for certain occupations."

Little sibs, big role

For eldest siblings, this is a pretty sweet deal. There is not much incentive for them to change a family system that provides them so many goodies, and typically they don't try to. Younger siblings see things differently and struggle early on to shake up the existing order. They clearly don't have size on their side, as their physically larger siblings keep them in line with what researchers call a high-power strategy. "If you're bigger than your siblings, you punch 'em," Sulloway says.

But there are low-power strategies too, and one of the most effective ones is humor. It's awfully hard to resist the charms of someone who can make you laugh, and families abound with stories of last-borns who are the clowns of the brood, able to get their way simply by being funny or outrageous. Birth-order scholars often observe that some of history's great satirists—Voltaire, Jonathan Swift, Mark Twain—were among the youngest members of large families, a pattern that continues today. Faux bloviator Stephen Colbert—who yields to no one in his ability to get a laugh—often points out that he's the last of 11 children.

Such examples might be little more than anecdotal, but personality tests show that while firstborns score especially well on the dimension of temperament known as conscientiousness—a sense of general responsibility and follow-through—later-borns score higher on what's known as agreeableness, or the simple ability to get along in the world. "Kids recognize a good low-power strategy," says Sulloway. "It's the way any sensible organism sizes up the niches that are available."

Even more impressive is how early younger siblings develop what's known as the theory of mind. Very small children have a hard time distinguishing the things they know from the things they assume other people know. A toddler who watches an adult hide a toy will expect that anyone who walks into the room afterward will also know where to find it, reckoning that all knowledge is universal knowledge. It usually takes a child until age 3 to learn that that's not so. For children who have at least one elder sibling, however, the realization typically comes earlier. "When you're less powerful, it's advantageous to be able to anticipate what's going on in someone else's mind," says Sulloway.

Later-borns, however, don't try merely to please other people; they also try to provoke them. Richard Zweigenhaft, a professor of psychology at Guilford College in Greensboro, N.C., who revealed the overrepresentation of firstborns in Congress, conducted a similar study of picketers at labor demonstrations. On the occasions that the events grew unruly enough to lead to arrests, he would interview the people the police rounded up. Again and again, he found, the majority were later- or last-borns. "It was a statistically significant pattern," says Zweigenhaft. "A disproportionate number of them were choosing to be arrested."

Courting danger

Later-borns are similarly willing to take risks with their physical safety. All sibs are equally likely to be involved in sports, but younger ones are likelier to choose the kinds that could cause injury. "They don't go out for tennis," Sulloway says. "They go out for rugby, ice hockey." Even when siblings play the same sport, they play it differently. Sulloway is currently collaborating on a study of 300 brothers who were major league ballplayers. Though the work is not complete, he is so far finding that the elder brothers excel at skills that involve less physical danger. Younger siblings are the ones who put themselves in harm's way—crouching down in catcher's gear to block an incoming runner, say. "It doesn't just hold up in this study but a dozen studies," Sulloway says.

It's not clear whether such behavior extends to career choice, but Sandra Black, an associate professor of economics at ucla, is intrigued by findings that firstborns tend to earn more than later-borns, with income dropping about 1% for every step down the birth-order ladder. Most researchers assume this is due to the educational advantages eldest siblings get, but Black thinks there may be more to it. "I'd be interested in whether it's because the second child is taking the riskier jobs," she says.

Black's forthcoming studies will be designed to answer that question, but research by Ben Dattner, a business consultant and professor of industrial and organizational psychology at New York University, is showing that even when later-borns take conservative jobs in the corporate world, they approach their work in a high-wire way. Firstborn ceos, for example, do best when they're making incremental improvements in their companies: shedding underperforming products, maximizing profits from existing lines and generally making sure the trains run on time. Later-born ceos are more inclined to blow up the trains and lay new track. "Later-borns are better at transformational change," says Dattner. "They pursue riskier, more innovative, more creative approaches."

If eldest sibs are the dogged achievers and youngest sibs are the gamblers and visionaries, where does this leave those in between? That it's so hard to define what middle-borns become is largely due to the fact that it's so hard to define who they are growing up. The youngest in the family, but only until someone else comes along, they are both teacher and student, babysitter and babysat, too young for the privileges of the firstborn but too old for the latitude given the last. Middle children are expected to step up to the plate when the eldest child goes off to school or in some other way drops out of the picture—and generally serve when called. The Norwegian intelligence study showed that when firstborns die, the IQ of second-borns actually rises a bit, a sign that they're performing the hard mentoring work that goes along with the new job.

Stuck for life in a center seat, middle children get shortchanged even on family resources. Unlike the firstborn, who spends at least some time as the only-child eldest, and the last-born, who hangs around long enough to become the only-child youngest, middlings are never alone and thus never get 100% of the parents' investment of time and money. "There is a U-shaped distribution in which the oldest and youngest get the most," says Sulloway. That may take an emotional toll. Sulloway cites other studies in which the self-esteem of first-, middle- and last-borns is plotted on a graph and follows the same curvilinear trajectory.

The phenomenon known as de-identification may also work against a middle-born. Siblings who hope to stand out in a family often do so by observing what the elder child does and then doing the opposite. If the firstborn gets good grades and takes a job after school, the second-born may go the slacker route. The third-born may then de-identify, opting for industriousness, even if in the more unconventional ways of the last-born. A Chinese study in the 1990s showed just this kind of zigzag pattern, with the first child generally scoring high as a "good son or daughter," the second scoring low, the third scoring high again and so on. In a three-child family, the very act of trying to be unique may instead leave the middling lost, a pattern that may continue into adulthood.

The holes in the theories

The birth-order effect, for all its seeming robustness, is not indestructible. There's a lot that can throw it out of balance—particularly family dysfunction. In a 2005 study, investigators at the University of Birmingham in Britain examined the case histories of 400 abused children and the 795 siblings of those so-called index kids. In general, they found that when only one child in the family was abused, the scapegoat was usually the eldest. When a younger child was abused, some or all of the other kids usually were as well. Mistreatment of any of the children usually breaks the bond the parents have with the firstborn, turning that child from parental ally to protector of the brood. At the same time, the eldest may pick up some of the younger kids' agreeableness skills—the better to deal with irrational parents—while the youngest learn some of the firstborn's self-sufficiency. Abusiveness is going to "totally disrupt the birth-order effects we would expect," says Sulloway.

The sheer number of siblings in a family can also trump birth order. The 1% income difference that Black detected from child to child tends to flatten out as you move down the age line, with a smaller earnings gap between a third and fourth child than between a second and third. The IQ-boosting power of tutoring, meanwhile, may actually have less influence in small families, with parents of just two or three kids doing most of the teaching, than in the six- or eight-child family, in which the eldest sibs have to pitch in more. Since the Norwegian IQ study rests on the tutoring effect, those findings may be open to question. "The good birth-order studies will control for family size," says Bo Cleveland, associate professor of human development and family studies at Penn State University. "Sometimes that makes the birth-order effect go away; sometimes it doesn't."

The most vocal detractors of birth-order research question less the findings of the science than the methods. To achieve any kind of statistical significance, investigators must assemble large samples of families and look for patterns among them. But families are very different things—distinguished by size, income, hometown, education, religion, ethnicity and more. Throw enough random factors like those into the mix, and the results you get may be nothing more than interesting junk.

The alternative is what investigators call the in-family studies, a much more pointillist process, requiring an exhaustive look at a single family, comparing every child with every other child and then repeating the process again and again with hundreds of other families. Eventually, you may find threads that link them all. "I would throw out all the between-family studies," says Cleveland. "The proof is in the in-family design."

Ultimately, of course, the birth-order debate will never be entirely settled. Family studies and the statistics they yield are cold and precise things, parsing human behavior down to decimal points and margins of error. But families are a good deal sloppier than that, a mishmash of competing needs and moods and clashing emotions, better understood by the people in the thick of them than by anyone standing outside. Yet millenniums of families would swear by the power of birth order to shape the adults we eventually become. Science may yet overturn the whole theory, but for now, the smart money says otherwise.

— *Reported by Dan Cray/Los Angeles*

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