

June 3, 2007

When Should a Kid Start Kindergarten?

By ELIZABETH WEIL

According to the apple-or-coin test, used in the Middle Ages, children should start school when they are mature enough for the delayed gratification and abstract reasoning involved in choosing money over fruit. In 15th- and 16th-century Germany, parents were told to send their children to school when the children started to act “rational.” And in contemporary America, children are deemed eligible to enter kindergarten according to an arbitrary date on the calendar known as the birthday cutoff — that is, when the state, or in some instances the school district, determines they are old enough. The birthday cutoffs span six months, from Indiana, where a child must turn 5 by July 1 of the year he enters kindergarten, to Connecticut, where he must turn 5 by Jan. 1 of his kindergarten year. Children can start school a year late, but in general they cannot start a year early. As a result, when the 22 kindergartners entered Jane Andersen’s class at the Glen Arden Elementary School near Asheville, N.C., one warm April morning, each brought with her or him a snack and a unique set of gifts and challenges, which included for some what’s referred to in education circles as “the gift of time.”

After the morning announcements and the Pledge of Allegiance, Andersen’s kindergartners sat down on a blue rug. Two, one boy and one girl, had been redshirted — the term, borrowed from sports, describes students held out for a year by their parents so that they will be older, or larger, or more mature, and thus better prepared to handle the increased pressures of kindergarten today. Six of Andersen’s pupils, on the other hand, were quite young, so young that they would not be enrolled in kindergarten at all if North Carolina succeeds in pushing back its birthday cutoff from Oct. 16 to Aug. 31.

Andersen is a willowy 11-year teaching veteran who offered up a lot of education in the first hour of class. First she read Leo Lionni’s classic children’s book “An Extraordinary Egg,” and directed a conversation about it. Next she guided the students through: writing a letter; singing a song; solving an addition problem; two more songs; and a math game involving counting by ones, fives and tens using coins. Finally, Andersen read them another Lionni book. Labor economists who study what’s called the accumulation of human capital — how we acquire the knowledge and skills that make us valuable members of society — have found that children learn vastly different amounts from the same classroom experiences and that those with certain advantages at the outset are able to learn more, more quickly, causing the gap between students to increase over time. Gaps in achievement have many causes, but a major one in any kindergarten room is age. Almost all kindergarten classrooms have children with birthdays that span 12 months. But because of redshirting, the oldest student in Andersen’s class is not just 12 but 15 months older than the youngest, a difference in age of 25 percent.

After rug time, Andersen’s kindergartners walked single-file to P.E. class, where the children sat on the curb

alongside the parking circle, taking turns running laps for the Presidential Fitness Test. By far the fastest runner was the girl in class who had been redshirted. She strode confidently, with great form, while many of the smaller kids could barely run straight. One of the younger girls pointed out the best artist in the class, a freckly redhead. I'd already noted his beautiful penmanship. He had been redshirted as well.

States, too, are trying to embrace the advantages of redshirting. Since 1975, nearly half of all states have pushed back their birthday cutoffs and four — California, Michigan, North Carolina and Tennessee — have active legislation in state assemblies to do so right now. (Arkansas passed legislation earlier this spring; New Jersey, which historically has let local districts establish their birthday cutoffs, has legislation pending to make Sept. 1 the cutoff throughout the state.) This is due, in part, to the accountability movement — the high-stakes testing now pervasive in the American educational system. In response to this testing, kindergartens across the country have become more demanding: if kids must be performing on standardized tests in third grade, then they must be prepping for those tests in second and first grades, and even at the end of kindergarten, or so the thinking goes. The testing also means that states, like students, now get report cards, and they want their children to do well, both because they want them to be educated and because they want them to stack up favorably against their peers.

Indeed, increasing the average age of the children in a kindergarten class is a cheap and easy way to get a small bump in test scores, because older children perform better, and states' desires for relative advantage is written into their policy briefs. The California Performance Review, commissioned by Gov. [Arnold Schwarzenegger](#) in 2004, suggested moving California's birthday cutoff three months earlier, to Sept. 1 from Dec. 2, noting that "38 states, including Florida and Texas, have kindergarten entry dates prior to California's." Maryland's proposal to move its date mentioned that "the change . . . will align the 'cutoff' date with most of the other states in the country."

All involved in increasing the age of kindergartners — parents, legislatures and some teachers — say they have the best interests of children in mind. "If I had just one goal with this piece of legislation it would be to not humiliate a child," Dale Folwell, the Republican North Carolina state representative who sponsored the birthday-cutoff bill, told me. "Our kids are younger when they're taking the SAT, and they're applying to the same colleges as the kids from Florida and Georgia." Fair enough — governors and state legislators have competitive impulses, too. Still, the question remains: Is it better for children to start kindergarten later? And even if it's better for a given child, is it good for children in general? Time out of school may not be a gift to all kids. For some it may be a burden, a financial stress on their parents and a chance, before they ever reach a classroom, to fall even further behind.

Redshirting is not a new phenomenon — in fact, the percentage of redshirted children has held relatively steady since education scholars started tracking the practice in the 1980s. Studies by the National Center for Education Statistics in the 1990s show that delayed-entry children made up somewhere between 6 and 9 percent of all kindergartners; a new study is due out in six months. As states roll back birthday cutoffs, there are more older kindergartners in general — and more redshirted kindergartners who are even older than the oldest kindergartners in previous years. Recently, redshirting has become a particular concern, because in <http://www.nytimes.com/2007/06/03/magazine/03kindergarten-t.html?ei=5090&en=57ba145d1683fcff&ex...> 6/5/2007

certain affluent communities the numbers of kindergartners coming to school a year later are three or four times the national average. “Do you know what the number is in my district?” Representative Folwell, from a middle-class part of Winston-Salem, N.C., asked me. “Twenty-six percent.” In one kindergarten I visited in Los Altos, Calif. — average home price, \$1 million — about one-quarter of the kids had been electively held back as well. Fred Morrison, a developmental psychologist at the [University of Michigan](#) who has studied the impact of falling on one side or the other of the birthday cutoff, sees the endless “graying of kindergarten,” as it’s sometimes called, as coming from a parental obsession not with their children’s academic accomplishment but with their social maturity. “You couldn’t find a kid who skips a grade these days,” Morrison told me. “We used to revere individual accomplishment. Now we revere self-esteem, and the reverence has snowballed in unconscious ways — into parents always wanting their children to feel good, wanting everything to be pleasant.” So parents wait an extra year in the hope that when their children enter school their age or maturity will shield them from social and emotional hurt. Elizabeth Levett Fortier, a kindergarten teacher in the George Peabody Elementary School in San Francisco, notices the impact on her incoming students. “I’ve had children come into my classroom, and they’ve never even lost at Candy Land.”

For years, education scholars have pointed out that most studies have found that the benefits of being relatively older than one’s classmates disappear after the first few years of school. In a literature review published in 2002, Deborah Stipek, dean of the Stanford school of education, found studies in which children who are older than their classmates not only do not learn more per grade but also tend to have more behavior problems. However, more recent research by labor economists takes advantage of new, very large data sets and has produced different results. A few labor economists do concur with the education scholarship, but most have found that while absolute age (how many days a child has been alive) is not so important, relative age (how old that child is in comparison to his classmates) shapes performance long after those few months of maturity should have ceased to matter. The relative-age effect has been found in schools around the world and also in sports. In one study published in the June 2005 *Journal of Sport Sciences*, researchers from Leuven, Belgium, and Liverpool, England, found that a disproportionate number of World Cup soccer players are born in January, February and March, meaning they were old relative to peers on youth soccer teams.

Before the school year started, Andersen, who is 54, taped up on the wall behind her desk a poster of a dog holding a bouquet of 12 balloons. In each balloon Andersen wrote the name of a month; under each month, the birthdays of the children in her class. Like most teachers, she understands that the small fluctuations among birth dates aren’t nearly as important as the vast range in children’s experiences at preschool and at home. But one day as we sat in her classroom, Andersen told me, “Every year I have two or three young ones in that August-to-October range, and they just struggle a little.” She used to encourage parents to send their children to kindergarten as soon as they were eligible, but she is now a strong proponent of older kindergartners, after teaching one child with a birthday just a few days before the cutoff. “She was always a step behind. It wasn’t effort and it wasn’t ability. She worked hard, her mom worked with her and she still was behind.” Andersen followed the girl’s progress through second grade (after that, she moved to a different school) and noticed that she didn’t catch up. Other teachers at Glen Arden Elementary and elsewhere have noticed a similar phenomenon: not always, but too often, the little ones stay behind.

The parents of the redshirted girl in Andersen's class told a similar story. Five years ago, their older daughter had just made the kindergarten birthday cutoff by a few days, and they enrolled her. "She's now a struggling fourth grader: only by the skin of her teeth has she been able to pass each year," the girl's mother, Stephanie Gandert, told me. "I kick myself every year now that we sent her ahead." By contrast, their current kindergartner is doing just fine. "I always tell parents, 'If you can wait, wait.' If my kindergartner were in first grade right now, she'd be in trouble, too." (The parents of the redshirted boy in Andersen's class declined to be interviewed for this article but may very well have held him back because he's small — even though he's now one of the oldest, he's still one of the shortest.)

Kelly Bedard, a labor economist at the [University of California](#), Santa Barbara, published a paper called "The Persistence of Early Childhood Maturity: International Evidence of Long-Run Age Effects" in *The Quarterly Journal of Economics* in November 2006 that looked at this phenomenon. "Obviously, when you're 5, being a year older is a lot, and so we should expect kids who are the oldest in kindergarten to do better than the kids who are the youngest in kindergarten," Bedard says. But what if relatively older kids keep doing better after the maturity gains of a few months should have ceased to matter? What if kids who are older relative to their classmates still have higher test scores in fourth grade, or eighth grade?

After crunching the math and science test scores for nearly a quarter-million students across 19 countries, Bedard found that relatively younger students perform 4 to 12 percentiles less well in third and fourth grade and 2 to 9 percentiles worse in seventh and eighth; and, as she notes, "by eighth grade it's fairly safe to say we're looking at long-term effects." In British Columbia, she found that the relatively oldest students are about 10 percent more likely to be "university bound" than the relatively youngest ones. In the United States, she found that the relatively oldest students are 7.7 percent more likely to take the SAT or ACT, and are 11.6 percent more likely to enroll in four-year colleges or universities. (No one has yet published a study on age effects and SAT scores.) "One reason you could imagine age effects persist is that almost all of our education systems have ability-groupings built into them," Bedard says. "Many claim they don't, but they do. Everybody gets put into reading groups and math groups from very early ages." Younger children are more likely to be assigned behind grade level, older children more likely to be assigned ahead. Younger children are more likely to receive diagnoses of attention-deficit disorder, too. "When I was in school the reading books all had colors," Bedard told me. "They never said which was the high, the middle and the low, but everybody knew. Kids in the highest reading group one year are much more likely to be in the highest reading group the next. So you can imagine how that could propagate itself."

Bedard found that different education systems produce varying age effects. For instance, Finland, whose students recently came out on top in an [Organization for Economic Cooperation and Development](#) study of math, reading and science skills, experiences smaller age effects; Finnish children also start school later, at age 7, and even then the first few years are largely devoted to social development and play. Denmark, too, produces little difference between relatively older and younger kids; the Danish education system prohibits differentiating by ability until students are 16. Those two exceptions notwithstanding, Bedard notes that she found age effects everywhere, from "the Japanese system of automatic promotion, to the accomplishment-

oriented French system, to the supposedly more flexible skill-based program models used in Canada and the United States.”

The relative value of being older for one’s grade is a particularly open secret in those sectors of the American schooling system that treat education like a competitive sport. Many private-school birthday cutoffs are set earlier than public-school dates; and children, particularly boys, who make the cutoff but have summer and sometimes spring birthdays are often placed in junior kindergarten — also called “transitional kindergarten,” a sort of holding tank for kids too old for more preschool — or are encouraged to wait a year to apply. Erika O’Brien, a SoHo mother who has two redshirted children at Grace Church, a pre-K-through-8 private school in Manhattan, told me about a conversation she had with a friend whose daughter was placed in junior kindergarten because she had a summer birthday. “I told her that it’s really a great thing. Her daughter is going to have a better chance of being at the top of her class, she’ll more likely be a leader, she’ll have a better chance of succeeding at sports. She’s got nothing to worry about for the next nine years. Plus, if you’re making a financial investment in school, it’s a less risky investment.”

Robert Fulghum listed life lessons in his 1986 best seller “All I Really Need to Know I Learned in Kindergarten.” Among them were:

Clean up your own mess.

Don’t take things that aren’t yours.

Wash your hands before you eat.

Take a nap every afternoon.

Flush.

Were he to update the book to reflect the experience of today’s children, he’d need to call it “All I Really Need to Know I Learned in Preschool,” as kindergarten has changed. The half day devoted to fair play and nice manners officially began its demise in 1983, when the National Commission on Excellence in Education published “A Nation at Risk,” warning that the country faced a “rising tide of mediocrity” unless we increased school achievement and expectations. No Child Left Behind, in 2002, exacerbated the trend, pushing phonics and pattern-recognition worksheets even further down the learning chain. As a result, many parents, legislatures and teachers find the current curriculum too challenging for many older 4- and young 5-year-olds, which makes sense, because it’s largely the same curriculum taught to first graders less than a generation ago. Andersen’s kindergartners are supposed to be able to not just read but also write two sentences by the time they graduate from her classroom. It’s no wonder that nationwide, teachers now report that 48 percent of incoming kindergartners have difficulty handling the demands of school.

Friedrich Froebel, the romantic motherless son who started the first kindergarten in Germany in 1840, would be horrified by what’s called kindergarten today. He conceived the early learning experience as a homage to

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Jean-Jacques Rousseau, who believed that “reading is the plague of childhood. . . . Books are good only for learning to babble about what one does not know.” Letters and numbers were officially banned from Froebel’s kindergartens; the teaching materials consisted of handmade blocks and games that he referred to as “gifts.” By the late 1800s, kindergarten had jumped to the United States, with Boston transcendentalists like Elizabeth Peabody popularizing the concept. Fairly quickly, letters and numbers appeared on the wooden blocks, yet Peabody cautioned that a “genuine” kindergarten is “a company of children under 7 years old, who do not learn to read, write and cipher” and a “false” kindergarten is one that accommodates parents who want their children studying academics instead of just playing.

That the social skills and exploration of one’s immediate world have been squeezed out of kindergarten is less the result of a pedagogical shift than of the accountability movement and the literal-minded reverse-engineering process it has brought to the schools. Curriculum planners no longer ask, What does a 5-year-old need? Instead they ask, If a student is to pass reading and math tests in third grade, what does that student need to be doing in the prior grades? Whether kindergarten students actually need to be older is a question of readiness, a concept that itself raises the question: Ready for what? The skill set required to succeed in Fulgham’s kindergarten — openness, creativity — is well matched to the capabilities of most 5-year-olds but also substantially different from what Andersen’s students need. In early 2000, the National Center for Education Statistics assessed 22,000 kindergartners individually and found, in general, that yes, the older children are better prepared to start an academic kindergarten than the younger ones. The older kids are four times as likely to be reading, and two to three times as likely to be able to decipher two-digit numerals. Twice as many older kids have the advanced fine motor skills necessary for writing. The older kids also have important noncognitive advantages, like being more persistent and more socially adept. Nonetheless, child advocacy groups say it’s the schools’ responsibility to be ready for the children, no matter their age, not the children’s to be prepared for the advanced curriculum. In a report on kindergarten, the National Association of Early Childhood Specialists in State Departments of Education wrote, “Most of the questionable entry and placement practices that have emerged in recent years have their genesis in concerns over children’s capacities to cope with the increasingly inappropriate curriculum in kindergarten.”

Furthermore, as Elizabeth Graue, a former kindergarten teacher who now studies school-readiness and redshirting at the [University of Wisconsin](#), Madison, points out, “Readiness is a relative issue.” Studies of early-childhood teachers show they always complain about the youngest students, no matter their absolute age. ‘In Illinois it will be the March-April-May kids; in California, it will be October-November-December,’ Graue says. “It’s really natural as a teacher to gravitate toward the kids who are easy to teach, especially when there’s academic pressure and the younger kids are rolling around the floor and sticking pencils in their ears.”

But perhaps those kids with the pencils in their ears — at least the less-affluent ones — don’t need “the gift of time” but rather to be brought into the schools. Forty-two years after [Lyndon Johnson](#) inaugurated Head Start, access to quality early education still highly correlates with class; and one serious side effect of pushing back the cutoffs is that while well-off kids with delayed enrollment will spend another year in preschool, probably doing what kindergartners did a generation ago, less-well-off children may, as the literacy specialist

Katie Eller put it, spend “another year watching TV in the basement with Grandma.” What’s more, given the socioeconomics of redshirting — and the luxury involved in delaying for a year the free day care that is public school — the oldest child in any given class is more likely to be well off and the youngest child is more likely to be poor. “You almost have a double advantage coming to the well-off kids,” says Samuel J. Meisels, president of Erikson Institute, a graduate school in child development in Chicago. “From a public-policy point of view I find this very distressing.”

Nobody has exact numbers on what percentage of the children eligible for publicly financed preschool are actually enrolled — the individual programs are legion, and the eligibility requirements are complicated and varied — but the best guess from the National Institute for Early Education Research puts the proportion at only 25 percent. In California, for instance, 76 percent of publicly financed preschool programs have waiting lists, which include over 30,000 children. In Pennsylvania, 35 percent of children eligible for Head Start are not served. A few states do have universal preschool, and among [Hillary Clinton](#)’s first broad domestic policy proposals as a Democratic presidential candidate was to call for universal pre-kindergarten classes. But at the moment, free high-quality preschool for less-well-to-do children is spotty, and what exists often is aimed at extremely low-income parents, leaving out the children of the merely strapped working or lower-middle class. Nor, as a rule, do publicly financed programs take kids who are old enough to be eligible for kindergarten, meaning redshirting is not a realistic option for many.

One morning, when I was sitting in Elizabeth Levett Fortier’s kindergarten classroom in the Peabody School in San Francisco — among a group of students that included some children who had never been to preschool, some who were just learning English and some who were already reading — a father dropped by to discuss whether or not to enroll his fall-birthday daughter or give her one more year at her private preschool. Demographically speaking, any child with a father willing to call on a teacher to discuss if it’s best for that child to spend a third year at a \$10,000-a-year preschool is going to be fine. Andersen told me, “I’ve had parents tell me that the preschool did not recommend sending their children on to kindergarten yet, but they had no choice,” as they couldn’t afford not to. In 49 out of 50 states, the average annual cost of day care for a 4-year-old in an urban area is more than the average annual public college tuition. A RAND Corporation position paper suggests policy makers may need to view “entrance-age policies and child-care policies as a package.”

Labor economists, too, make a strong case that resources should be directed at disadvantaged children as early as possible, both for the sake of improving each child’s life and because of economic return. Among the leaders in this field is James Heckman, a [University of Chicago](#) economist who won the Nobel in economic science in 2000. In many papers and lectures on poor kids, he now includes a simple graph that plots the return on investment in human capital across age. You can think of the accumulation of human capital much like the accumulation of financial capital in an account bearing compound interest: if you add your resources as soon as possible, they’ll be worth more down the line. Heckman’s graph looks like a skateboard quarter-pipe, sloping precipitously from a high point during the preschool years, when the return on investment in human capital is very high, down the ramp and into the flat line after a person is no longer in school, when the

return on investment is minimal. According to Heckman's analysis, if you have limited funds to spend it makes the most economic sense to spend them early. The implication is that if poor children aren't in adequate preschool programs, rolling back the age of kindergarten is a bad idea economically, as it pushes farther down the ramp the point at which we start investing funds and thus how productive those funds will be.

Bedard and other economists cite Heckman's theories of how people acquire skills to help explain the persistence of relative age on school performance. Heckman writes: "Skill begets skill; motivation begets motivation. Early failure begets later failure." Reading experts know that it's easier for a child to learn the meaning of a new word if he knows the meaning of a related word and that a good vocabulary at age 3 predicts a child's reading well in third grade. Skills like persistence snowball, too. One can easily see how the skill-begets-skill, motivation-begets-motivation dynamic plays out in a kindergarten setting: a child who comes in with a good vocabulary listens to a story, learns more words, feels great about himself and has an even better vocabulary at the end of the day. Another child arrives with a poor vocabulary, listens to the story, has a hard time following, picks up fewer words, retreats into insecurity and leaves the classroom even further behind.

How to address the influence of age effects is unclear. After all, being on the older or younger side of one's classmates is mostly the luck of the birthday draw, and no single birthday cutoff can prevent a 12-month gap in age. States could try to prevent parents from gaming the age effects by outlawing redshirting — specifically by closing the yearlong window that now exists in most states between the birthday cutoffs and compulsory schooling. But forcing families to enroll children in kindergarten as soon as they are eligible seems too authoritarian for America's tastes. States could also decide to learn from Finland — start children in school at age 7 and devote the first year to play — but that would require a major reversal, making second grade the old kindergarten, instead of kindergarten the new first grade. States could also emulate Denmark, forbidding ability groupings until late in high school, but unless very serious efforts are made to close the achievement gap before children arrive at kindergarten, that seems unlikely, too.

Of course there's also the reality that individual children will always mature at different rates, and back in Andersen's classroom, on a Thursday when this year's kindergartners stayed home and next year's kindergartners came in for pre-enrollment assessments, the developmental differences between one future student and the next were readily apparent. To gauge kindergarten readiness, Andersen and another kindergarten teacher each sat the children down one by one for a 20-minute test. The teachers asked the children, among other things, to: skip; jump; walk backward; cut out a diamond on a dotted line; copy the word cat; draw a person; listen to a story; and answer simple vocabulary questions like what melts, what explodes and what flies. Some of the kids were dynamos. When asked to explain the person he had drawn, one boy said: "That's Miss Maple. She's my preschool teacher, and she's crying because she's going to miss me so much next year." Another girl said at one point, "Oh, you want me to write the word cat?" Midmorning, however, a little boy who will not turn 5 until this summer arrived. His little feet dangled off the kindergarten chair, as his legs were not long enough to reach the floor. The teacher asked him to draw a person. To pass that portion of the test, his figure needed seven different body parts.

“Is that all he needs?” she asked a few minutes later.

The boy said, “Oh, I forgot the head.”

A minute later the boy submitted his drawing again. “Are you sure he doesn’t need anything else?” the teacher asked.

The boy stared at his work. “I forgot the legs. Those are important, aren’t they?”

The most difficult portion of the test for many of the children was a paper-folding exercise. “Watch how I fold my paper,” the teacher told the little boy. She first folded her 8 1/2 -by-11 -inch paper in half the long way, to create a narrow rectangle, and then she folded the rectangle in thirds, to make something close to a square.

“Can you do it?” she asked the boy.

He took the paper eagerly, but folded it in half the wrong way. Depending on the boy’s family’s finances, circumstances and mind-set, his parents may decide to hold him out a year so he’ll be one of the oldest and, presumably, most confident. Or they may decide to enroll him in school as planned. He may go to college or he may not. He may be a leader or a follower. Those things will ultimately depend more on the education level achieved by his mother, whether he lives in a two-parent household and the other assets and obstacles he brings with him to school each day. Still, the last thing any child needs is to be outmaneuvered by other kids’ parents as they cut to the back of the birthday line to manipulate age effects. Eventually, the boy put his head down on the table. His first fold had set a course, and even after trying gamely to fold the paper again in thirds, he couldn’t create the right shape.

Elizabeth Weil is a contributing writer for the magazine. Her most recent article was about lethal injection.

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