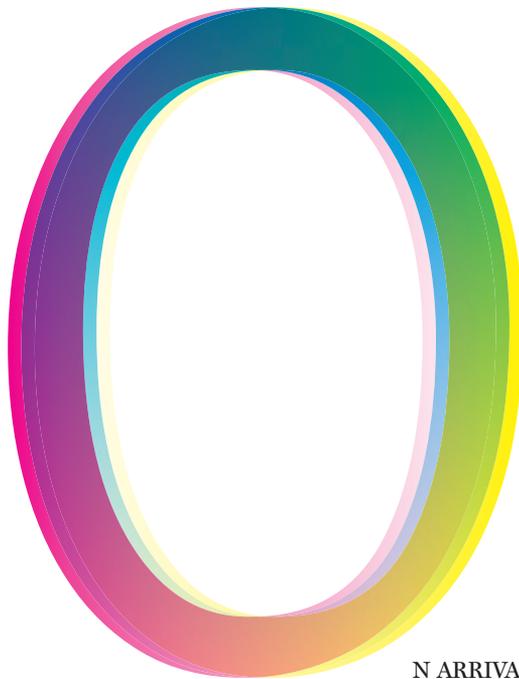




WHEN SEX AND GENDER COLLIDE

Studies of transgender kids are revealing fascinating insights about gender in the brain. Many trans children show surprisingly firm identities at young ages, for instance, and important differences divide trans girls from boys who like pink

BY KRISTINA R. OLSON



ON ARRIVAL AT A FRIEND'S HOUSE FOR DINNER one night in the fall of 2008, I joined the evening's youngest guest, five-year-old Noah, who was playing on the couch. Little did I know he would single-handedly change the course of my career.

As a professor of developmental psychology, hanging out at the kids' table is not unusual for me. I study how children think about themselves and the people around them, and some of my



keenest insights have come from conversations like this one. After some small talk, I saw Noah glance around the room, appear to notice that no one was looking and retrieve something from inside his pocket. The reveal was slow but the result unmistakable: a beloved set of Polly Pocket dolls.

Over the next few years I got to know Noah well and learned more about his past (all names of children here are pseudonyms to protect their privacy). Noah's parents had first noticed that he was different from his brother in the preschool years. He preferred female playmates and toys more commonly associated with girls, but his parents were unfazed. As he got older, Noah grew out his previously short hair and replaced his fairly gender-neutral wardrobe with one that prominently featured Twinkle Toes—shoes that lit up in pink as he stepped. Unlike many similar kids, Noah's family, friends and school fully accepted him. They even encouraged him to meet other kids like himself, boys who flouted gender norms. Along with the other adults in Noah's life, I couldn't help but wonder: What did Noah's behavior mean? Was he gay? Could he just be a kid who paid less attention to gender norms than most? At the time I had no idea that these questions would soon guide my scientific research.

Life for Noah started to change when he hit third and fourth grade. Noah recently explained how at this time, it became increasingly apparent that although people accepted his preferences and befriended him nonetheless, the way he saw himself—as a girl—was at odds with the way others saw him. When people used his name and male pronouns, he realized that they thought of him as a boy. Noah remembers that this awareness made him increasingly unhappy—a feeling that had been rare just a few years earlier. According to his mom, previously cheerful and high-spirited Noah became sad and melancholy. This is when his family, after consulting with local therapists, reached a big decision that had been in the making for years. Noah

IN BRIEF

The TransYouth Project is an ongoing research study following more than 300 transgender and gender-nonconforming kids for 20 years to learn how their gender identity develops.

Results so far show that trans children have just as firm a sense of their own gender as nontrans kids at very early ages, both when asked directly and when tested. Furthermore, trans kids follow different trajectories than children who simply prefer toys and clothes associated with the opposite gender.

In addition to helping uncover the roots of gender, early results of these studies suggest that trans kids who are supported through early social transitions have strong mental health and self-esteem.



came out as transgender, and accordingly Noah's friends, family and school community were asked to use a new name, Sarah, and to refer to Sarah as a girl.

At this point I had been studying developmental psychology for a decade, mostly looking into how young children think about the social categories—race, gender, social class—around them. In my free time, I looked for research about kids such as Sarah. Not a single quantitative study had investigated young children who had “switched” gender. (“Sex” refers to the biological categories male and female, whereas “gender” references one's identification with the social and cultural attributes and categories traditionally attached to each sex.) At that time nearly all adults who were transgender had transitioned much later in life, and almost no one had supported their early gender nonconformity (their desire to express preferences or behaviors that defy societal expectations for their sex). I wondered what we could learn about gender from such young pioneers as Sarah. What was the impact of transition-



FOURTEEN-YEAR-OLD SARAH, photographed at home, knew from a young age that she was a girl rather than the boy she seemed to be at birth.

Children continue to associate themselves strongly with their sex group when asked both directly and indirectly. One experiment involves asking young participants to sort photographs of children on a computer screen into “boys” and “girls” while categorizing a set of words as either “me” words (like “me” and “myself”) or “not me” words (like “they” and “them”). Researchers measure how quickly kids can make these categorizations when “boys” and “me” share one response key and “girls” and “not me” share another, compared with how quickly they can make the opposite pairings (“girls” with “me” and “boys” with “not me”). Past studies have found that an overwhelming majority of girls are faster at pairing “girls” with “me” and boys are faster at pairing “boys” with “me.” Although scientists debate which aspects of development are innate or culturally constructed, or a combination of both, and not every child goes through the same gender pathway, most—including those children raised in families who vary in their parenting style, political beliefs, and racial and ethnic group membership—show the pattern we have described. And most parents, teachers and other adults never give it a second thought—except when kids start asserting that their gender is not what others expect it to be.

EARLY DIFFERENCES

WHEN I BEGAN the TransYouth Project in 2013, I wanted to understand whether, when and why young people such as Sarah do and do not behave like their peers in terms of their early gender development. The TransYouth Project is an ongoing study of hundreds of transgender and gender-nonconforming children. We focus on kids in the U.S. and Canada who are three to 12 years old when they begin the study, and we plan to follow them for 20 years.

What has been most surprising to me about our findings so far are the myriad ways in which trans kids’ early gender development is remarkably similar to that of their peers. That is, children like Sarah look like other girls at every age but nothing like boys on measures of gender identity and preferences. Similarly, transgender boys (children who identify as boys but at birth were considered to be girls) perform like other boys on our tests. For example, one common observation in the preschool years is a strong hypergendered appearance—girls who *love* princess dresses; boys who avoid pink like it’s the plague. We find the same thing in our youngest transgender children. The degree of their preferences for stereotypical clothes, as well as their tendency to prefer to befriend those of their self-identified gender and the degree to which they see themselves as members of their gender group, is statistically indistinguishable from their peers’ responses on the same measures throughout the childhood years.

Furthermore, when predicting their identities into the future, trans girls see themselves becoming women and trans boys feel that they will be men, just as other girls and boys do. Even when we present children with more indirect or implicit measures of gender identity—

ing on children’s mental health and identity? What would this decision mean for their future?

HOW WE LEARN GENDER

WHEN MOST PEOPLE HEAR about trans children, they are surprised. How could a three-year-old have such a clear sense of gender identity? People frequently compare early-identifying trans children with those who go through phases of believing they are cats or dinosaurs or who have imaginary friends. They use this comparison as evidence that no young child *knows* his or her identity or what is real or not real. Yet decades of work on gender development suggests these are precisely the ages at which nearly all kids are coming to understand their own and others’ gender identities.

In Western cultures (where most of this research has been done), within the first year of life infants begin to distinguish people by sex, seeing individuals as either male or female. By about 18 months toddlers begin to understand gendered words such as “girl” or “man” and associate those words with sex-matched faces. By 24 months children know of sex stereotypes (such as associating women with lipstick), and before their third birthday nearly all kids label themselves and others with gender labels that match their sex.

During the preschool years, large numbers of young people go through what gender researchers May Ling Halim of California State University, Long Beach, and Diane Ruble of New York University call the “pink frilly dress stage”: most girls become obsessed with frilly princess dresses or similarly “gendered” clothing, whereas many boys prefer superhero gear or formal wear and actively avoid pink. Around this time children also often exhibit strong preferences for the company of same-sex friends, engage in activities stereotypically associated with their sex and show a developing understanding that their sex is an enduring quality—believing that girls develop into women and boys into men.

Through the elementary school years, most chil-



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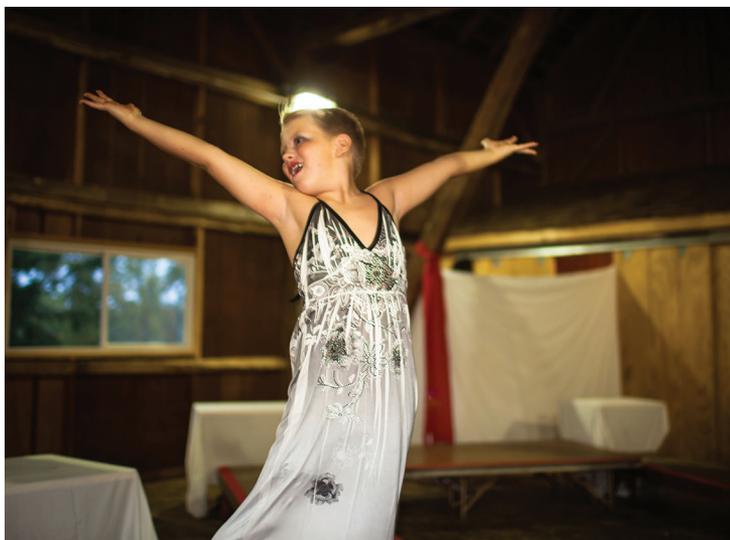
the measures that assess reaction times rather than children's more explicit words and actions—we have found that trans girls see themselves as girls and trans boys see themselves as boys, suggesting that these identities are held at lower levels of conscious awareness. All this research combines to show that transgender identities in even very young children are surprisingly solid and consistent across measures, contradicting popular beliefs that such feelings are fleeting or that children are simply pretending to be the opposite gender.

THE ROOTS OF GENDER

BUT WHERE DOES THE FEELING of gender come from in the first place? The science is still far from conclusive. Because of how early this sense of identity can emerge, researchers have been looking for genetic and neuro-anatomical signs in transgender people. One approach scientists often use in studying genetics is to look at twins. A major difference between identical and fraternal twins is that the former share more of their genetic material than the latter. If researchers find more agreement in transgender identity among identical twins than in fraternal twins, they infer that genetics play some role. And in fact, this is exactly what early studies are finding (although identical twins may also share more aspects of their socialization and environment). For example, in one 2012 review of the literature, Gunter Heylens of Ghent University in Belgium and his colleagues looked at 44 sets of same-sex twins in which at least one twin identified as transgender. They found that in nine of the 23 identical twin pairs, both siblings were transgender, whereas in no case among the 21 same-sex fraternal twin pairs were both twins transgender, suggesting transgender identity has some genetic underpinning. Despite these results, however, which particular genetic variations are involved is an open question.

Similarly, although some neuroscience studies have shown that brain structures of trans people resemble those of individuals with the same gender identity, rather than people with the same sex at birth, these findings have often involved small samples and have not yet been replicated. Further complicating interpretation of neuroscience results is the fact that brains change in response to experience, so even when differences appear, scientists do not know whether structural or functional brain differences *cause* the experience of a particular gender identity or *reflect* the experience of gender identity. Muddying the already murky waters, neuroscientists continue to debate whether even among people who are not transgender, there are reliable sex (or gender) differences in brains [see “Is There a ‘Female’ Brain?” on page 38]. Thus, whereas the topic is an active line of work in many research laboratories around the world, definitive conclusions about genetic and neural correlates of gender identity remain elusive.

Perhaps the most critical questions about transgender children, however, are about their well-being.



CHARLIE prefers clothes and toys associated with girls but identifies as a boy. He is pictured here at age 10.

Transgender adults and teens who did not go through the early social transition of kids such as Sarah and who were often rejected by peers and even their own families tend to have highly elevated rates of anxiety and depression. Estimates suggest that more than 40 percent of these largely unsupported trans teens and adults will attempt suicide. Many families like Sarah's report that these heartbreaking statistics are why they supported their children's early transitions.

My colleagues and I are finding—both in reports from parents and from kids themselves—that trans youth who make the social transition at a young age are doing remarkably well. They have depression rates comparable to their peers and only slightly elevated rates of anxiety. They also show very strong self-esteem. Whether these indicators of mental health stay strong as our cohort of trans children moves into the teen years remains to be seen, and certainly our all-volunteer sample is unlikely to be fully representative of all trans children alive today. Yet paired with work suggesting that interventions in adolescence (that involve not only social transitions but also hormonal therapy) are associated with improved mental health, these findings suggest that the high rates of depression, anxiety and suicide seen in earlier studies are not inevitable. Instead, as the world becomes more educated about transgender people, as rejection and bullying decrease, and as these youth receive support and intervention at earlier ages, we are optimistic that mental health risks will decrease.

“PINK BOYS” AND TOMBOYS

THE FIRST QUESTION I typically get when talking about transgender kids is something like, “Are you saying tomboys are actually transgender?” or “I used to be a boy who loved princess dresses. Are you suggesting I was transgender?” Of course, not all children who defy sex stereotypes as Sarah did are transgender. In



SARAH'S DECISION to transition genders was made in elementary school. Sarah is shown with her parents here.

gravitates to toys and clothes associated with the opposite gender may distinguish kids who ultimately identify as transgender from those who do not—on average, children like Sarah show even more gender nonconformity than children like Charlie. Other studies have suggested that the way kids talk about their gender identity—feeling you are a girl versus feeling that you wish the world was okay with your being a feminine boy (what Charlie's mom calls a “pink boy”)—predicts the different paths of children like Sarah versus Charlie.

Researchers are also increasingly recognizing and studying people with nonbinary identities. Put simply, these are individuals who do not feel as if they are boys or girls, men or women, nor do they feel fully masculine or feminine. Instead many nonbinary people fall somewhere in the middle of a spectrum from masculine to feminine. To date, our research team has worked with several children who see themselves this way, but this group is not yet large enough from which to draw any strong conclusions.

What is undoubtedly true is that scientists have much to learn about children such as Sarah and Charlie. What does it mean to have a sense of yourself as a boy or a girl or something else? What makes a child more or less likely to identify that way? And how can we help all kids to be comfortable with themselves? Finding answers is especially difficult because gender is defined by culture, which constantly changes. In 1948, for instance, only 32 percent of adults believed women should wear slacks in public. Certainly feminine boys and masculine girls are not new; they are widely recognized in many indigenous cultures.

Today 14-year-old Sarah and 13-year-old Charlie are self-confident, smart and hardworking teens. Sarah plays piano, varsity field hockey and recently took up track. Charlie plays in a band and performs in theater. Both kids are popular and spend more of their time worrying about doing well in school and the complexities of adolescent social networks than about their gender. Both look to the future, excited about the possibilities that await them in college and beyond. Sarah says she wants to raise children with her future husband and aspires to make the world better for trans young people like herself. Charlie has dreams of moving to New York City to perform on Broadway. Both teens hope one day kids like them will be accepted for who they are regardless of the gender labels they use. In that hope, surely all of us can agree. ■

GENDERLESS BABY

In **2017**

Canada issued what may be the world's first genderless ID card to a baby born to a parent who preferred not to designate the child as either male or female.

fact, I would venture to say that most of them are not.

One such kid is Charlie. On the surface Charlie seemed a lot like Sarah early in life. Both were assumed to be boys at birth, and both showed signs by the preschool years that they were different. As with Sarah, Charlie loved all things feminine. His mom recalls that by age two, Charlie loved pink sparkly clothing and would put a towel over his head pretending it was hair. Much like Sarah's family, Charlie's family introduced him to other boys who loved feminine stuff. And over the years some of these children, like Sarah, socially transitioned. But Charlie did not. I recently asked Charlie about his decision not to transition. He explained that his family (sometimes with the help of a therapist) spent a lot of time talking about social transitions and made it clear that they were onboard if that was what he wanted. Charlie said he considered this possibility in the back of his mind for several years but ultimately decided that although he unabashedly liked stereotypically “girl” things (in fact the very day I interviewed him, Charlie was wearing pink shorts, a purple T-shirt and a pink scarf to school) and even if he occasionally uses a girl's name at camp, at the end of the day Charlie feels that he is a boy. As his mom explained, Charlie said that what he really wanted was for the world to accept him as he is—to let him wear what he wanted to wear and do what he wanted to do. But he did not truly feel he was a girl.

My work with children such as Charlie is ongoing, but preliminary data from others suggest that distinctive developmental trajectories may differentiate Sarah and Charlie. For instance, the degree to which a child

MORE TO EXPLORE

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FROM OUR ARCHIVES

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