

The
**Storytelling
Animal**



{ HOW STORIES MAKE US HUMAN }

Jonathan Gottschall



HOUGHTON MIFFLIN HARCOURT • BOSTON • NEW YORK

HUMBER LIBRARIES LAKESHORE CAMPUS
3199 Lakeshore Blvd West
TORONTO, ON. M8V 1K8

Copyright © 2012 by Jonathan Gottschall

All rights reserved

For information about permission to reproduce selections from this book,
write to Permissions, Houghton Mifflin Harcourt Publishing Company,
215 Park Avenue South, New York, New York 10003.

www.hmhbooks.com

Library of Congress Cataloging-in-Publication Data
Gottschall, Jonathan.

The storytelling animal: how stories make us human /
Jonathan Gottschall.

p. cm.

Includes bibliographical references and index.

ISBN 978-0-547-39140-3

1. Storytelling. 2. Literature and science. I. Title.

GR72.3.G67 2012

808.5'43—dc23

2011042372

Book design by Brian Moore

Printed in the United States of America

DOC 10 9 8

Blizzard Entertainment® and The World of Warcraft®
are registered trademarks of Blizzard Entertainment, Inc.



The Riddle of Fiction

It seems incredible, the ease with which we sink through books quite out of sight, pass clamorous pages into soundless dreams.

— WILLIAM GASS, *Fiction and the Figures of Life*

IFACE THE HEAVY security door. I punch my code into the keypad. The lock clicks, and I step through the door into the entryway. I smile a greeting at the director doing paperwork in her office. I sign the visitors log, open an interior gate, and am inside the asylum that I visit most days after work.

The room is wide and long and high-ceilinged. It has hospital-hard floors and fluorescent lights. Colorful art is taped to the walls, and safety scissors lie spread-eagle on the tables. I smell lemony antiseptic and the cafeteria lunches of Tater Tots and Beefaroni. As I make my way toward the back of the room, the inmates babble and yell and bawl and snarl. Some wear ordinary clothes; others are dressed like ninjas, nurses, or frilly princesses. Many of the males brandish improvised

weapons; many of the females hold magic wands or swaddled infants.

It's disconcerting. The inmates can see things that I can't—and hear, feel, and taste them, too. There are wicked men lurking in the shadows, and monsters, and the salt smell of the ocean, and the mists of the mountains where a lost baby is wailing for her mother.

Small bunches of inmates seem to be sharing the same hallucination. They fight danger or flee from it as one. They cooperate in cooking fake suppers for little babies who just won't behave. As I continue on toward the back corner of the room, one hero warns me that I am about to step into the jaws of the dragon he is slaying. I thank him. The bold fighter asks a question, and as I veer toward safety, I answer, "I'm sorry, buddy, I don't know when your mom will be here."

At the back of the room, two princesses are tucked in a nook made out of bookshelves. The princesses are sitting Indian-style in their finery, murmuring and laughing—but not with each other. They are both cradling babies on their laps and babbling to them, as mothers do. The small one with the yellow hair notices me. Leaping to her feet, she drops her baby on his head. "Daddy!" Annabel cries. She flies to me, and I sweep her into the air.

At about the age of one, something strange and magical buds in a child. It reaches full bloom at the age of three or four and begins to wilt by seven or eight. At one, a baby can hold a banana to her head like a phone or pretend to put a teddy bear to bed. At two, a toddler can cooperate in simple dramas, where the child is the bus driver and the mother is the passenger, or where the father is the child and the child is the father. Two-year-olds also begin learning how to develop a charac-

ter. When playing the king, they pitch their voices differently than when they are playing the queen or the meowing cat. At three or four, children enter into the golden age of pretend play, and for three or four more years, they will be masters of romps, riots, and revels in the land of make-believe.

Children adore art by nature, not nurture. Around the world, those with access to drawing materials develop skills in regular developmental stages. Children adore music by nature. I remember how my own one-year-olds would stand and "dance" to a tune: smiling toothlessly, bobbing their huge heads, flailing their hands. And by nature children thrill to fictions in puppet shows, TV cartoons, and the storybooks they love to tatters.

To children, though, the best thing in life is play: the exuberance of running and jumping and wrestling and all the danger and splendor of pretend worlds. Children play at story by instinct. Put small children in a room together, and you will see the spontaneous creation of art. Like skilled improv performers, they will agree on a dramatic scenario and then act it out, frequently breaking character to adjust the scenario and trade performance notes.

Children don't need to be tutored in story. We don't need to bribe them to make stories like we bribe them to eat broccoli. For children, make-believe is as automatic and insuppressible as their dreams. Children pretend even when they don't have enough to eat, even when they live in squalor. Children pretended in Auschwitz.

Why are children creatures of story?

To answer this question, we need to ask a broader one first: why do humans tell stories at all? The answer may seem obvious: stories give us joy. But it isn't obvious that stories *should* give us joy, at least not in the way it's biologically obvi-



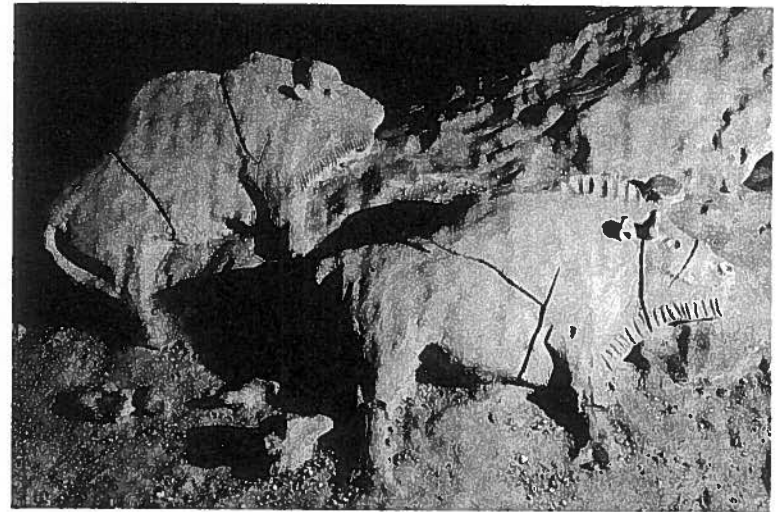
Impoverished Indonesian children in the garbage dump where they play.

ous that eating or sex should give us joy. It is the joy of story that needs explaining.

The riddle of fiction comes to this: Evolution is ruthlessly utilitarian. How has the seeming luxury of fiction *not* been eliminated from human life?

The riddle is easy to pose but hard to solve. To begin to see why, hold your hand up in front of your face. Rotate it. Make a fist. Wiggle your fingers. Press each fingertip to your thumb, one after another. Pick up a pencil and manipulate it. Tie your shoelaces.

The human hand is a marvel of bioengineering. In a compact space, it packs 27 bones, 27 joints, 123 ligaments, 48 nerves, and 34 muscles. Almost everything about the hand is



Clay bison, Tuc d'Audoubert cave, Ariège, France. The riddle of fiction is part of a bigger biological riddle, the riddle of art. Fifteen thousand years ago in France, a sculptor swam, crawled, and squirmed his way almost a kilometer down into a mountain cave. The sculptor shaped a male bison rearing to mount a cow and then left his creation in the guts of the earth. The clay bison are an excellent illustration of the evolutionary riddle of art. Why do people make and consume art when doing so has real costs in time and energy and no obvious biological payoffs?

for something. The nails are for scratching and picking and prying. The fingerprints, or papillary ridges, are crucial to our fine sense of touch. Even the sweat ducts on our hands are arranged with purpose: they keep our hands moist, which improves the stickiness of our grip. (A dry finger slides, which is why you may lick your finger before turning this page.) But the pride of the hand is the fully opposable thumb. Without thumbs, our hands would be only a marginal improvement over a pirate's hook. Other animals, with their thumbless extremities, can merely paw at the world, or butt and scrape it with their hooves. But because we humans have thumbs, we can seize hold of it and manipulate it to our ends.



Using their hands and faces, humans can be eloquent without words.

Now indulge me by asking yourself what might seem like a stupid question: what is your hand *for*?

Well, a hand is obviously for eating. A hand is for caressing. A hand is for making fists and bludgeoning. A hand is for making tools and wielding them. A hand is lascivious: it is for groping and tickling and teasing. Hands are for making sense: we wave them around to amplify what we are saying. My own hands are for all of the above, but these days they are mostly for thumbing through books and typing.

Our hands are tools, but evolution did not shape them for one single thing. The hand is not the biological equivalent of a hammer or a screwdriver; the hand is a multipurpose tool like a Swiss Army knife—it is *for* many things.

What is true for the hand is true for many other body parts. Eyes are mainly for seeing, but they also help us communicate our emotions. They narrow when we sneer and when we laugh. They water when we are very sad and, strangely

enough, when we are very happy. We have lips because we need a hole to take in food and breath. But lips are multipurpose, too. We use them to express affection through kisses. We flex our lips to let people know what's going on inside our skulls: if we are happy, sad, or killing mad. And lips, of course, are also for speaking.

What is true for lips and hands is also true for the brain, and the behaviors driven by it. Take generosity. While evolutionary psychologists debate where humans sit on the continuum between selflessness and selfishness, it is obvious that humans behave generously under many conditions. What is generosity for? It is for a lot of things: enhancing reputation, wooing mates, attracting allies, helping kinsmen, banking favors, and so on. Generosity isn't for any one thing, and it wasn't forged by a single evolutionary force. Likewise the human penchant for story. Fiction might be *for* a lot of things.

Like what?

Some thinkers, following Darwin, argue that the evolutionary source of story is sexual selection, not natural selection. Maybe stories, and other art forms, aren't just *obsessed with sex*; maybe they are ways of *getting sex* by making gaudy, peacocklike displays of our skill, intelligence, and creativity—the quality of our minds. Thumb back a few pages to that image of the !Kung San storyteller on page 19. Look at the young woman sitting to the storyteller's left—very pretty, very rapt. *That's* the idea.

Or maybe stories are a form of cognitive play. For the evolutionary literary scholar Brian Boyd, “a work of art acts like a playground for the mind.” Boyd suggests that the free play of art, in all its forms, does the same sort of work for our mental muscles that rough-and-tumble play does for our physical muscles.

Or maybe stories are low-cost sources of information and vicarious experience; maybe, to modify Horace, stories delight *in order* to instruct. Through stories we learn about human culture and psychology, without the potentially staggering costs of having to gain this experience firsthand.

Or maybe story is a form of social glue that brings people together around common values. The novelist John Gardner expresses this idea nicely: “Real art creates myths a society can live by instead of die by.” Go back again to the !Kung San storyteller. Look how he has brought his people together, skin against skin, mind against mind.

These and other theories are all plausible, and we’ll return to them later. But before doing so, we need to tackle a different possibility: that story may be for nothing at all. At least not in biological terms.

YOUR BRAIN ON DRUGS

The Krel made first contact at a professional football game, easing their flying saucer down on the fifty-yard line. A mouth yawned open in the ship’s belly, and a ramp protruded like a tongue. The terrified fans watched as an alien named Flash appeared in the portal and staggered down the ramp. Flash had a white-blond brush cut and ears like small, fleshy trumpets. He wore a red jumpsuit with a bolt of lightning tearing across his chest. Flash hurried down the ramp, saying, “Cocaine. We need cocaine.”

In John Kessel’s short story “Invaders,” the Krel cross the universe just to score coke. The earthlings are confused, so the Krel explain that they have a different sense of the aesthetic. For them, the beauty of the cocaine molecule is simply shat-

tering. Cocaine is the universe’s most sublime chemical symphony. The Krel don’t *do* coke; they experience it as art.

Toward the end of the story, Flash reclines on trash bags in an alley, sharing a crack pipe with a fellow junkie. The alien makes a confession: that talk about the beauty of the cocaine molecule was high-minded nonsense. The Krel, Flash admits, do coke “for kicks.”

And that’s the point of Kessel’s story. Fiction, like cocaine, is a drug. People may invent high-minded aesthetic (or evolutionary) justifications for their fiction habits, but story is just a drug we use to escape from the boredom and brutality of real life. Why do we go to see a Shakespeare play, or watch a film, or read a novel? Ultimately, from Kessel’s point of view, it is not to expand our minds, explore the human condition, or do anything else so noble. We do it for kicks.

Many evolutionary thinkers would agree with Kessel’s position. What are stories *for*? *Nothing*. The brain is not *designed for* story; there are glitches in its design that make it *vulnerable to* story. Stories, in all their variety and splendor, are just lucky accidents of the mind’s jury-rigged construction. Story may educate us, deepen us, and give us joy. Story may be one of the things that makes it most worthwhile to be human. But that doesn’t mean story has a biological purpose.

Storytelling, in this view, is nothing like the opposable thumb—a structure that helped our ancestors survive and reproduce. In this view, story is more akin to the lines on your palm. No matter what your fortuneteller claims, the lines are not maps of your future. They are side effects of the flexion of the hand.

Let’s make this point more concrete with an example. I recently watched the silly and poignant Judd Apatow film

Funny People—a “bromance” about a standup comedian (Adam Sandler) with a terminal illness. I liked it: I laughed, I cried, the whole bit.

Why did I enjoy the film? If fiction is an evolutionary side effect, the answer is simple: because I enjoy funny things and the film was funny. I laughed a lot, and laughing makes people feel good. I liked it also because, as a human, I’m nosy and gossip-hungry. And the film let me spy, unseen, on people living at the extremes. I liked the film because it soaked my brain in the heady chemicals associated with wild sex, fist-fights, and aggressive humor, without the risk of earning those chemicals honestly.

Other evolutionary thinkers find this side-effect view deeply unsatisfactory. No way, they insist. If story were just pleasurable frippery, then evolution would have long ago eliminated it as a waste of energy. The fact that story is a human universal is strong evidence of biological purpose. Well, maybe. But is it really so easy for natural selection to target the genes that lead me to waste my time on *Funny People* and *Hamlet*—time that could be spent earning money or procreating or doing any number of other things with obvious evolutionary benefits?

No. Because my strong attraction to fiction is deeply interwoven with my attraction to gossip and sex and the thrill of aggression. In short, it would be difficult to get rid of the evolutionary bathwater of story without also throwing out the baby—without doing violence to psychological tendencies that are clearly functional and important.

If you feel as if your brain is being twisted into a knot, you’re not alone. I don’t know for sure whether story is an evolutionary adaptation or a side effect, and neither at this point does anyone else. Science consists of repeated rounds of



Behind the scenes on a porn set. Storytelling may also be a simple by-product of having an imagination. Maybe once we evolved a “mental holodeck” for game planning and other practical purposes, we realized we could get cheap thrills by uploading fictions onto it. This would parallel the evolution of the computer: we invented it for utilitarian reasons but soon figured out that we could use it to look at naked people doing naughty things.

conjecture and refutation, and when it comes to this particular question—“Why story?”—we are mainly in a conjectural phase. My own view is that we probably gravitate to story for a number of different evolutionary reasons. There may be elements of storytelling that bear the impression of evolutionary design, like the tweezing grip we can make with our fingers and thumbs. There may be other elements that are evolutionary by-products, like the specific pattern of freckles and hair follicles on the backs of our hands. And there may be elements of story that are highly functional now but were not sculpted by nature for that purpose, such as hands moving over the keys of a piano or a computer.

In chapters to come, we’ll explore the evolutionary ben-

efits of story, the way that a penchant for pretend has helped humans function better as individuals and as groups. But before we get to the arguments and evidence, we need to prepare the way by returning to the nursery. The carnage and chaos of children's make-believe provides clues to fiction's function.

THE WORK OF CHILDREN

Grownups have a tendency to remember the land of make-believe as a heavenly, sun-kissed bunny land. But the land of make-believe is less like heaven and more like hell. Children's play is not escapist. It confronts the problems of the human condition head-on. As the teacher and writer Vivian Paley says of pretend play, "Whatever else is going on in this network of melodramas, the themes are vast and wondrous. Images of good and evil, birth and death, parent and child, move in and out of the real and the pretend. There is no small talk. The listener is submerged in philosophical position papers, a virtual recapitulation of life's enigmas."

Pretend play is deadly serious fun. Every day, children enter a world where they must confront dark forces, fleeing and fighting for their lives. I've written some of this book at my kitchen table, with the land of make-believe changing shape around me. One day as I sat at the table, my two daughters were making elaborate pretend preparations to run away from home. Earlier they had played dolls on the back deck and then had run screeching through the yard as sharks tried to eat them. (They managed to harpoon the sharks with sticks.) Later that same day, I took a break to play "lost forest children" with my younger daughter, Annabel. She set the scene: Pretend our parents are dead, she told me, "bited by tigers."

From now on we would live deep in a tiger-infested forest, fending for ourselves.

Children's pretend play is clearly about many things: mommies and babies, monsters and heroes, spaceships and unicorns. And it is also about only one thing: trouble. Sometimes the trouble is routine, as when, playing "house," the howling baby won't take her bottle and the father can't find his good watch. But often the trouble is existential. Here's an unedited sequence of stories that preschoolers made up, on the spot, when a teacher asked, "Will you tell me a story?"

- The monkeys, they went up sky. They fall down. Choo choo train in the sky. I fell down in the sky in the water. I got on my boat and my legs hurt. Daddy fall down from the sky. (Boy, three)
- [Baby] Batman went away from his mommy. Mommy said, "Come back, come back." He was lost and his mommy can't find him. He ran like this to come home [she illustrates with arm movements]. He eat muffins and he sat on his mommy's lap. And then him have a rest. He ran very hard away from his mommy like that. I finished. (Girl, three)
- This is a story about a jungle. Once upon a time there was a jungle. There were lots of animals, but they weren't very nice. A little girl came into the story. She was scared. Then a crocodile came in. The end. (Girl, five)
- Once there was a little dog named Scooby and he got lost in the woods. He didn't know what to do. Velma couldn't find him. No one could find him. (Girl, five)
- The boxing world. In the middle of the morning

everybody gets up, puts on boxing gloves and fights. One of the guys gets socked in the face and he starts bleeding. A duck comes along and says, "give up." (Boy, five)

What do the stories have in common? They are short and choppy. They are all plot. They are marked by a zany creativity: flying choo-choos and talking ducks. And they are bound together by a fat rope of trouble: a father and son plummet from the clouds; baby Batman can't find his mother; a girl is menaced by a crocodile; a little dog wanders lost in the woods; a man is bludgeoned and bloodied.

A different collection of 360 stories told by preschoolers features the same kind of terrors: trains running over puppies and kittens; a naughty girl being sent to jail; a baby bunny playing with fire and burning down his house; a little boy slaughtering his whole family with a bow and arrows; a different boy knocking out people's eyes with a cannon; a hunter shooting and eating three babies; children killing a witch by driving 189 knives into her belly. These stories amply support the play scholar Brian Sutton-Smith, who writes, "The typical actions in orally told stories by young children include being lost, being stolen, being bitten, dying, being stepped on, being angry, calling the police, running away or falling down. In their stories they portray a world of great flux, anarchy, and disaster."

Themes of mortal trouble aren't limited to the arguably artificial stories children invent for psychologists. Trouble also runs through transcripts of spontaneous play recorded in homes and daycares. Take this transcript of a preschool play session recorded by Vivian Paley. Three-year-old Marni is

rocking an empty crib, humming to herself and looking at a doll's arm that she can see beneath a pile of dress-up clothes.

Teacher: "Where's the baby, Marni? That crib is very empty."

Marni: "My baby went to someplace. Someone is crying."

(Marni stops rocking the crib and looks around. There is a boy shoveling away at the sand table.)

Marni: "Lamar, did you see my baby?"

Lamar: "Yeah she's in a dark forest. It's dangerous in there. You better let me go. It's down in this hole I'm making."

Marni: "Are you the daddy? Bring me my baby, Lamar. Oh, good for you, you find her."

Teacher: "Was she in the dark forest?"

Marni: "Where was she, Lamar? Don't tell me in a hole. No, not in a hole, not my baby."

Or consider another play session, in which several children act out a spectacularly convoluted plot involving dynamite and princesses, bad guys and pilfered gold, endangered kitties and bold frog-ninja-dwarfs. The dialogue captures the almost-psychedelic creativity and exuberance of children's play: it reads like a page out of Hunter S. Thompson.

"Pretend you're a frog and you jump into a bad guy but you don't know it."

"Grab 'em!"

"He's stealing kitty!"

"Get him, over there, get him!"

“Blast him, grind him up, he got the gold!”

“Meow, meow, meow.”

“Here’s your kitty, Snow White.”

“Are you the dwarfs? The frog dwarfs?”

“We’re the ninja dwarfs. The frog is a ninja. Watch out!”

“We might have to blow this place up again!”

BOYS AND GIRLS

Vivian Paley is a MacArthur Foundation “genius award” winner who has been writing about her experiences as a preschool and kindergarten teacher for decades. In her small masterpiece of kiddie anthropology, *Boys and Girls: Superheroes in the Doll Corner*, Paley describes a yearlong experiment in the psychology of gender. But Paley didn’t set out to run an experiment. Her main goal was just to make her class work better, and for that to happen, she needed the boys to behave. In Paley’s classroom, the boys were agents of chaos and entropy. They dominated the block corner, where they constructed battleships, starships, and other engines of war and then deployed them in loud, dire battles. The girls kept to the doll corner, where they decked themselves out in dress-up clothes, took care of their babies, chatted about their boyfriends, and usually managed to lure over a boy or two to play the roles of princes or fathers.

Paley was born in 1929. Her teaching career spanned massive changes in the fabric of American culture, not least of all in the standard gender roles of men and women. Yet over her career, pretend play hardly changed at all. As Paley’s career progressed from the 1950s through the 2000s, women moved into the workforce and men took on duties at home. But in



Paley’s classroom, the calendar always seemed to be stuck at 1955. The children were precious little embodiments of gender stereotypes.

Paley—a loving teacher and a wonderfully sensitive observer of children—*hated* this. Her career was spent mainly at the University of Chicago Laboratory Schools, where the values of the whole institution aligned squarely with Paley’s own liberal leanings. The parents of Paley’s students mainly avoided buying their daughters Barbie dolls for fear of encouraging unhealthy body images, and few allowed their boys to play with toy guns.

Paley watched in dismay as gender roles slowly hardened in her classroom. The girls were just so . . . *girlie*. They played dolls; they pined for their princes; they rarely ran or wrestled or shouted; they often told stories about bunnies and magical

pink hippos. And the boys were so . . . *boyish*. They sprinted and shouted and happily rioted; they shot the whole room full of imaginary bullet holes and scorched it with bombs. Denied toy guns, the boys fashioned them out of vaguely gun-shaped objects such as crayons, and when teachers confiscated those, the boys still had their fingers.

Worst of all, when the boys played pirates or robbers, they needed what all hard men need most: victims. And what better victims could there be than the girls? The boys were constantly slashing or blasting their way into the doll corner, dealing death and dragging away spoils. This would often drive the girls to tears—not so much because they disliked being shot or robbed, but because the boys were ruining their own fantasies. It is hard to play Cinderella when Darth Vader and his stormtroopers keep crashing the ball.

Paley's book *Boys and Girls* is about the year she spent trying to get her pupils to behave in a more unisex way. And it is a chronicle of spectacular and amusing failure. None of Paley's tricks or bribes or clever manipulations worked. For instance, she tried forcing the boys to play in the doll corner and the girls to play in the block corner. The boys proceeded to turn the doll corner into the cockpit of a starship, and the girls built a house out of blocks and resumed their domestic fantasies.

Paley's experiment culminated in her declaration of surrender to the deep structures of gender. She decided to let the girls be girls. She admits, with real self-reproach, that this wasn't that hard for her: Paley always approved more of the girls' relatively calm and prosocial play. It was harder to let the boys be boys, but she did. "Let the boys be robbers," Paley concluded, "or tough guys in space. It is the natural, universal, and essential play of little boys."

I've been arguing that children's pretend play is relentlessly focused on trouble. And it is. But as Melvin Konner demonstrates in his monumental book *The Evolution of Childhood*, there are reliable sex differences in how boys and girls play that have been found around the world. Dozens of studies across five decades and a multitude of cultures have found essentially what Paley found in her midwestern classroom: boys and girls spontaneously segregate themselves by sex; boys engage in much more rough-and-tumble play; fantasy play is more frequent in girls, more sophisticated, and more focused on pretend parenting; boys are generally more aggressive and less nurturing than girls, with the differences being present and measurable by the seventeenth month of life. The psychologists Dorothy and Jerome Singer sum up this research: "Most of the time we see clear-cut differences in the way children play. Generally, boys are more vigorous in their activities, choosing games of adventure, daring, and conflict, while girls tend to choose games that foster nurturance and affiliation."

The Neverland boys inhabit is very dangerous; the threat of death and destruction is everywhere. Boys' time in Neverland consists largely of fighting that threat or fleeing from it. The Neverland of girls is dangerous, too, but not quite so crowded with hobgoblins and ax murderers, and not as focused on exuberant physical play. The sorts of dilemmas girls face are often less extreme, with a focus on workaday domestic crises.

But it is important to stress that girl play only *seems* untroubled when compared to the mayhem of boy play. Risk and darkness seep into the doll corner as well. For example, Paley recounts how, at first glance, it may seem that the girls are sweetly playing mother and baby. But look closer. First, the baby almost gets fed poison apple juice. Then a bad guy



The role of sex hormones in gender generally, and play behavior specifically, is illuminated by a disorder called congenital adrenal hyperplasia (CAH), which results in females being exposed to abnormally high levels of male sex hormones in utero. Girls with CAH are quite normal in most respects, but “affected girls show more boy-typical play, prefer playing with boys more, and are less interested in marriage, motherhood, doll play and infant care.” Girls with CAH enjoy rough-and-tumble as much as boys do, and they prefer “boy” toys such as trucks and guns over “girl” toys such as dolls and dress-up clothes.

tries to steal the baby. Then the baby “gets his bones broken off” and is almost set on fire.

Similarly, Paley recounts an incident where two girls playing Rainbow Brite and her flying pony, Starlite (magical characters from a 1980s animated television series), are having dinner together. Everything is going fine until a bad guy named Lurky appears. The cute little characters, played by two cute little girls, have no choice but to kill Lurky with explosives.

Unlike some of the other subjects of this book—fiction or

dreams—almost no one thinks that children’s pretend play is some sort of random accident of human evolution. The pioneering child psychologist Jean Piaget, who thought that the fantasy life of children was “a muddle out of which more adequate and orderly ways of thinking will emerge,” is now definitely in the minority. These days, experts in child psychology agree that pretend play is *for* something. It has biological functions. Play is widespread in animals, and all but universal in mammals, especially the smart ones. The most common view of play across species is that it helps youngsters rehearse for adult life. From this perspective, children at play are training their bodies and brains for the challenges of adulthood—they are building social and emotional intelligence. Play is important. Play is the work of children.

Sex differences in children’s play reflect the fact that biological evolution is slow, while cultural evolution is fast. Evolution hasn’t caught up with the rapid changes in men’s and women’s lives that have occurred mainly in the past one hundred years. Children’s play still seems to be preparing girls for lives beside the hearth and preparing boys for lives of action in the world. This is the basic division of labor—men doing the hunting and fighting and women doing most of the foraging and parenting—that has characterized human life over tens of thousands of years. Anthropologists have never found a culture where, say, women do the lion’s share of fighting or men do most of the child care.

Writing this, I feel a little like the narrator in Edgar Allan Poe’s “The Black Cat.” Before tying a noose and hanging the titular feline from a tree, the narrator first digs out the cat’s eye with a jackknife. Confessing his crime, he writes, “I blush, I burn, I shudder, while I pen the damnable atrocity!” The idea that gender has deep biological roots is something almost

everyone accepts these days but still avoids saying in polite company. It sounds too much like a limit on human potential, especially on the potential of women to move into positions of cultural equality. But the spectacular changes in women's lives over the past half century—driven largely by the way that cheap and reliable contraception has given women control of their fertility—should allay our fears.

When my daughter Annabel announces her plan to become a princess when she grows up, I squirm. I say, "You know you can be other things, like a doctor." And Annabel replies, "I'll be a princess *and* a doctor. And a mommy." And I smile and say, "Okay."

AND DOWN WILL COME BABY

Where do the blood and tears of children's play come from? It's possible that they come partly from the stories we tell them. In the Grimms' collection of fairy tales, for example, children are menaced by cannibal witches, wolves bolt down personified pigs, mean giants and innocent children meet grisly deaths, Cinderella is orphaned, and the ugly stepsisters slash off chunks of their feet in hopes of cramming them into the tiny glass slipper (and this is before getting their eyes pecked out by birds). And then there's a tale called "How the Children Played Butcher with Each Other," which was published in the first edition of the Grimms' tales. Here is the story entire:

A man once slaughtered a pig while his children were looking on. When they started playing in the afternoon, one child said to the other: "You be the little pig, and I'll be the butcher," whereupon he took an open blade and thrust it into his broth-

er's neck. Their mother, who was upstairs in a room bathing the youngest child in a tub, heard the cries of her other child, quickly ran downstairs, and when she saw what had happened, drew the knife out of the child's neck and, in a rage, thrust it into the heart of the child who had been the butcher. She then rushed back to the house to see what her other child was doing in the tub, but in the meantime it had drowned in the bath. The woman was so horrified that she fell into a state of utter despair, refused to be consoled by the servants, and hanged herself. When her husband returned home from the fields and saw this, he was so distraught that he died shortly thereafter.

The standard nursery rhymes are about as bad: babies fall out of trees "cradle and all," a little boy mutilates a dog,



Image from "The Old Witch," an English fairy tale.

an old woman who lives in a shoe cruelly whips her starving children, blind mice are hacked up with carving knives, Cock Robin is murdered, and Jack smashes his skull. In one collection of familiar nursery rhymes, a critic counted eight murders, two choking deaths, one decapitation, seven cases of severed limbs, four cases of broken bones, and more. And in a different study, researchers found that contemporary children's television programs had about five violent scenes per hour, while read-aloud nursery rhymes had fifty-two.

Although fairy tales for modern children have been sanitized, they are still full of disturbing material. For example, while the stepsisters' bloody mutilation has been scrubbed from the versions of "Cinderella" I have read to my girls, the story still describes something much worse: a girl's loving parents die, and she falls into the hands of people who despise her.

So is the storm and strife of children's make-believe just an echo of the trouble children find in the stories we give them? Is the land of make-believe dangerous because, all around the world, children just happen to be exposed to fictions that crackle with trouble?

That possibility, even if it were true, wouldn't really answer this question; it would just prompt a new one: why are the stories of *Homo sapiens* fixated on trouble?

The answer to that question, I think, provides an important clue to the riddle of fiction.