



Thumbs, Toes, and Tears: And Other Traits That Make Us Human

Chip Walter , Ray Kurzweil (Foreword by)

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"A fluid introduction to the development of the human species."--Booklist

Among the countless traits and behaviors that separate us from the rest of the animal kingdom, six stand out--our big toe, opposable thumb, oddly shaped pharynx, and our abilities to laugh, kiss, and cry. Though seemingly unconnected, they are actually closely linked, each marking a fork in the evolutionary road where we went one way and the rest of the animal kingdom went another. Drawing on complexity theory, the latest brain scanning techniques, and new insights from fields as diverse as anthropology and artificial intelligence, science writer Chip Walter explains why our brains grew so large and complex, why we find one another sexually attractive, how tool making laid the mental groundwork for language, why we care about what others think, and how we became the creature that laughs and cries and falls in love. Original, informative, and thought-provoking, *Thumbs, Toes, and Tears* will increase your sense of wonder and appreciation for how unique *Homo sapiens* truly is.

Thumbs, Toes, and Tears: And Other Traits That Make Us Human Details

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Michael says

This book explores a number of traits that are unique (or at least semi-unique) to humans. The book flows smoothly enough, and explains concept in easily digestible terms. Towards the later chapters the content becomes a bit more speculative and far less technical. It's almost as if some of the weaker chapters were saved for the end. Still, overall the book gives good insights into human evolution and explores multiple theories about how these evolutionary traits came to be.

Evelyn says

This was an interesting book all and all. The writing was engaging and informative, and seemed very well researched.

It reminded me of the book "Your Inner Fish", which I recommend over this one.

However, I have issues with some of the findings that are presented. For example, on the chapter about tears Walter cites that women cry more often than men, possibly due to more hormones that need to be released (specifically prolactin). He then states that children of the two genders cry about the same amount until puberty hits, where women begin to cry more.

While this is fine and all, his complete disregard for any social pressures on this finding was upsetting, especially as he later dismisses the 'need to release excess hormones' theory later on in the chapter.

There are small, but noticeable, comments in the foot notes, and inclusions of certain studies that show a certain bias with the author in terms of gender roles, attitudes, and behavior. (Another example was that when discussing what prehistoric women would look for in a man he lists honesty/reliability/power while a prehistoric man would look purely for "nice strings of DNA" and "ample breasts, shapely hips...", trivializing only women to sex objects/Or when he shared support that men "excel in tasks...like mathematics while women excel at... language")

His commentary and handling of autism was also misguided and distressing.

Besides that, each chapter is not solely based on its topic, it often wanders for more than necessary. For example, the chapter on kissing spends six pages on pheromones (out of twenty two pages).

While I found some of this distasteful, it didn't wholly ruin the book for me.

Emily says

3.5 stars. This book was really interesting, and helped me remember how truly amazing our bodies really are. Also it had lots of cool info on early child development, and I had fun looking for the traits they talked about in my one year old.

Only 3.5 stars because I have a hard time deeply loving non-fiction books. Also, I felt like some of the points were made again and again and again and again. I got it the first time. It is a good read though.

Melody says

I love this book because it's based on science AND very readable. The thing I remember the most is learning about how the brain developed. I also learned about how and why our ancestors started walking upright, using their brains, and the subsequent challenges to birthing children.

Kyle Woodward says

Humans are awesome! A little repetitive, but otherwise interesting book on the theories about how we evolved specific traits and which came first. 4.5 stars

Sistermagpie says

What a fun read. T,T and T focuses on certain adaptations that are purely human, roughly in the order they occurred (if scientists have thoughts on that), showing just how amazing they are and how they pushed us towards being human. It makes just walking down the street more inspiring when you're appreciating your big toe making it possible. Humans rock!

Monica says

I went into a bookstore, next door, and they get a bunch of books weekly, that have not been published yet. And they get to review them, and send in comments, corrections, and suggestions. Well, in that stack was this book, and I started reading it then and there. Great read. Smart, cohesive, and gripping. Let your kids read this book, and soon.

Seth says

Woah.

Chip Walter's premise in Thumbs, Toes, and Tears, is pretty simple: What makes us different from other animals? Why and how did those differences evolve, and how does it affect us today?

The results are extraordinary. This is a rare book: an extremely informative and well-referenced book that is easy and fun to read, and will have your brain working overtime comprehending all that it's about. He breaks it down into chapters that sort of focus on each trait, and each one becomes more of a mystery as the book progresses, starting with our large toes being the precursor to us walking upright, our remarkably childlike appearance as compared to other animals, our opposable thumbs and long fingers, our huge and inefficient

brains and the extremely efficient network of capillaries in our scalp that keeps it cool.

The last half progresses into the harder stuff: Why do we laugh? Why do we cry? Why do we kiss? Walter is quick to point out when noted scientists are really only guessing, and when they feel more confident about their findings. He boils down what must be hundreds of behavioral studies into an easily-digestible format. The whole thing is utterly fascinating.

I'm sure the next time I see someone cry on TV I'll be thinking of the hormones that tears vent out of our body when we are sad. Or thinking of how strange laughter must seem to primates. The whole thing is an intriguing window on what makes us such unusual beasts.

Karla says

I thought this book was very informative and well written. It was easy to understand all of the scientific information that the author had gathered and it was all very interesting.

Josh says

A nice description of evolutionary theory framed around a few particularly human traits.

Our ability to learn outside the womb (vs instinct-only behaviour on account of genetics) is a big deal. This theme makes the epilogue's notion of *cyber sapiens* a bit less silly than usual because I happen to see culture as fitting well with technology to enable more changes. That's changes and not advances.

KMO says

I first spoke with Chip Walter about Thumbs, Toes, and Tears for episode 13 of the C-Realm Podcast. I just put out episode 349, so Chip is one of the foundational guests of the podcast. I can't wait to speak with him about his new book, Last Ape Standing.

Here is a list of links to all of Chip Walter's appearances on the C-Realm Podcast:

<http://c-realm.com/podcasts/crealm/13...>

<http://c-realm.com/podcasts/crealm/14...>

<http://c-realm.com/podcasts/crealm/90...>

Thank you, Chip!

Norma says

Gained an appreciation of the importance of our big toes (among other things).

Joe says

Anyone remember Desmond Morris's *The Naked Ape*? This is similar ... and similarly amazing. You'll be surprised to learn how our bodies evolved to be what they are today, but even more amazed at the end of the book by what the author says is coming for our species. Startling! Things we take for granted — crying, kissing, how we talk, our unique way of reproducing — all have big consequences for our survival. It's a fascinating account of the little things that make us "human." How some embrace bogus stuff like "intelligent design" and ignore science is astounding to me. This is a fun read, and you'll never think about your body the same way again. Rating: 4 out of 5 very essential big toes.

Kevin says

I think I need to get this part out of the way. *The Third Chimpanzee: The Evolution and Future of the Human Animal* by Jared Diamond is one of my favorite books if not my favorite book, warts and all. When you know something good then you tend to be interested in other things similar, right? I heard about this book and decided that it was going to be good. Hell, the title is even similar to one of Diamond's other books, *Guns, Germs, and Steel*.

I am now reminded of that time I told someone that my favorite movie was *Miller's Crossing*. They showed up the next day with a movie to loan to me and said, "If you like *Miller's Crossing* you'll **love** *Road to Perdition*." It was all I could do to be polite and not say, "No, I said *Miller's Crossing* is my **favorite movie**." You can't just walk in here and presume to know me better than I know myself and dictate my tastes to me." I did end up watching *Road to Perdition* and honestly I can't remember any of it. Horrible movie, a flawed example of the genre.

Let me tell you ... with regards to this book the reviews - as well as my own expectations, because I was excited to read something new in the same vein - have totally *Perdition'd* me.

Of course truly it's an unfair comparison from the start. Here's the fastest way I know to break it down:

- 1.) Jared Diamond is a scientist.
- 2.) Chip Walter is a science journalist.

If I'd realized that at the beginning then I may never have started this book.

Walter really gets off on humanity. He loves exploring it, thinking about it, turning it over in his hands and trying to really understand it, to see how every last piece fits together. This is what he writes about, in some of the most purple prose ever. Let me quote from the chapter on laughter:

"Laughter is one of the great mysteries of human behavior. It evades understanding and resists analysis,

partly because it thoroughly combines the primal and intellectual parts of us. Yet we barely acknowledge what an unusual behavior laughing is, mostly because it is so woven into the woof and weave of our lives. Like the noses on our faces and the lobes of our ears, it's familiar to the point of invisibility. Yet if it were suddenly plucked out of our existence, we would be lost because we use it constantly to send strange and mysterious signals to one another."

Aside from the bizarre inaccuracy, what with me being almost completely unfamiliar with the lobes of my own ears, the phrase "it is so woven into the woof and the weave of our lives" is so gushingly dramatic it makes me kind of queasy.

Another tidbit, this one from the chapter on lips:

"It would be an altogether different and considerably less violent world if the limbic systems of every child emerged into adulthood untrammelled. On the other hand, Shakespeare, Jane Austen, Tolstoy, Hemingway, Woody Allen, and Alfred Hitchcock all would have been robbed of the fascinating, conflicted, obsessed characters they created to keep us in our seats and turning the pages of their unforgettable works. All of literature and entertainment has been built on the backs of our limbic systems and the conflicts they create."

I'm not interested in Mr. Walter's "My Top Five (Okay, Six) Writers Who Created Complex Characters", I'm interested in why humans use their lips the way they do. Unfortunately by the end of the chapter I felt no better educated.

Okay, I realize it's a popular science book. I'm just spoiled - by whom? Yes. Jared Diamond. Let me go ahead and beat that horse one more time - and expect my popular science to be served up in legible form without a heavy dose of English major. Fast, full of facts, and with conclusions that make me say, "Oh HOLY CRAP I never realized that's why X is like that!" I want my popular science to clarify and de-mystify the world around me. I can't say that happened to me once while reading this book. I know that Walter meant to make it accessible but to whom? Clearly to someone that is not me.

Martyna says

A wonderful tale that very successfully merges evolution and psychology. I have read this book in middle school, and to this day remember so many of the ideas discussed within. It blew my mind and literally changed my life, since it started a love of science that determined my choice of degree and - hopefully - a career. It is a very easy and fascinating read, always to the point and capable of surprising the reader with every chapter.

Sarah says

This book was full of interesting tidbits of information. The author outlined what he felt were the key characteristics that make us human, such as opposable thumbs and laughter, and how they evolved. He manages a good balance between scientific research and simple language that makes his theories seem believable and easily understood. My favorite sections were those dealing with laughter, language, and the ability to cry actual tears. I have always wondered how aspects such of these could have come about during

the evolutionary process. It's hard to imagine how we made the leap from communicating with hand gestures to a complex system of language. Or how tears and laughter could have gained enough of a foothold to be passed down to future generations.

Amilia says

VERY good book, so far. If you've ever wondered how humans came to speak, learn a language, and just evolved to be able to do such human things, this is a book with an answer.

Jake Berlin says

all in all, a very good overview of human evolution and what sets us apart from other animals. at times it seems like the author tried a little too hard to fit everything into neat little categories, but that's a small quibble, because the evidence is presented clearly and interestingly, and the reader is left in awe of nature generally, and humans in particular.

Rick Bavera says

Thumbs, Toes and Tears covers one of my favorite areas--science, most specifically science that looks at some of the traits of humans, and why we do what we do. Chip Walter looks at our thumbs, big toes, pharynx, laughter, tears and kissing.

The book is full of great information, and the author has distilled a lot in order to keep the book a reasonable length.

I found myself looking to know more. I will have to track down other materials to satisfy my curiosity.

Sandi says

This is generally about our evolution but with some of our Special traits that make us human
