

**JOE MCGONEGAL:** This is the MIT Alumni Books Podcast. I'm Joe McGonegal, writer for the MIT Alumni Association.

Fathers are important. Just ask any emperor penguin whose father sat on its egg for two months while the mother journeyed to the sea to feed herself, or ask the mimic poison frog, who carries his tadpoles to water once they hatch and nearly raises them himself. Are human fathers just as important?

Today's author, Paul Raeburn, Class of 1972, examines that question in his new book, *Do Fathers Matter? What Science Is Telling Us About the Parent We've Overlooked*. Raeburn is a regular contributor to *The New York Times*, *Discover*, *Scientific American*, and *The Huffington Post*, and is chief media critic for the Knight Science Journalism Tracker at MIT.

Like his first three books, which explored genetic engineering, the secrets of the planet Mars, and depression in children, Raeburn's nonfiction emerges from his own basic questions about science and his yearning to fact check closely held beliefs and presumptions about science in everyday life. I spoke with Raeburn by Skype and asked him why fatherhood came into his sights as a book topic.

**PAUL RAEBURN:** Well, I have to say it came into my sights in the usual way. I happen to have children, which will make you think about fatherhood a little bit. And I had done-- my previous book was called *Acquainted With the Night*, that you mentioned in the introduction, about some problems my kids had had with depression and bipolar disorder when they were adolescents. Thankfully, things are much better now. But I wrote that book about what it was like for us as a family to go through that. It wasn't easy. I'm sure many other alums have had similar experiences with mental illness with their kids. It's not a thing that our society, our social system handles very well.

So I wrote about that. And when I finished that book, I felt like I wanted to say something more about related issues. And I thought at first I wanted to do a book about the teenage brain. As you may know, there's a lot of new research on the teen brain and how it continues to develop through the teenage years on into the 20s, and maybe for life long. I was looking at all the research on teenagers through the eyes of a father. And it suddenly dawned on me that what I was really interested in was fathers, and in particular, what they contribute to their children.

We know that in many families, of course, things are changing. But in many families, fathers work full time and contribute a lot to the financial well-being of their families. But what about beyond that? What else do fathers do?

One that I was very interested in was language. You might think that mothers would contribute more to their children's language development, because in many families, despite the economic changes we've gone through, in many families, mothers still spend more time with their children than fathers do.

So some researchers in North Carolina, they looked at fathers' involvement, engagement with their children when they were three years old and then went back and looked at the children again a year later. And it turned out that fathers' involvement and engagement was strongly correlated with children's language development and vocabulary, and mothers' involvement and engagement showed no correlation at all.

I found this very surprising. And what the researchers think is going on is that mothers who spend more time with their kids become attuned to the kids and tend to use words and phrases that the children understand. Fathers, who may spend less time with their children, don't know what the children don't know and will often use more words, a broader vocabulary, and stretch the children and bring them along. So that's just one of many examples where fathers contribute important things to their kids' development.

**MCGONEGAL:** In reading your book, we discover so that your thesis is fathers matter during conception, they matter during pregnancy, they matter after pregnancy. They matter during childhood. Spoiler alert, fathers matter.

**RAEBURN:** Spoiler, right, yeah. Thanks a lot. Now how am I going to get people to buy the book?

**MCGONEGAL:** But of course, you walk a fine line between insulting anybody who grew up without fathers and is doing just fine, of course, through arguing with the courts and with the legislatures and medical associations who don't want to credit fathers with everything they do.

**RAEBURN:** Well, you're right. There are all kinds of hot button policy and social issues that this touches on. I hasten to say that this is a completely nonpartisan book. I think in a way in a tradition that I think MIT alums will respect, I really try to look at the science, what the data show us and what we know. We need to have that first before we can discuss social policies towards parents and mothers and fathers and those many issues that can become very complicated.

So I'm certainly not saying that children need a father in the house to grow up healthy or to be successful.

Let's take one career at random, let's say, politics. We have two people in recent years who have done quite well in politics-- and of course, I'm talking about Barack Obama and Bill Clinton-- despite growing up without a father in the house. So we have a couple of examples there, that it is possible to do well without having a father. But it's also true that at different ages of children, fathers do make substantial contributions.

And I think one of the lessons-- a friend of mine who is a single mother, I ran into her at school drop off the other morning. And she said, so tell me about the book. What should I do as a single mother?

And in fact, there are some researchers who think that it would be important for single mothers, however they came to be single mothers, to involve father figures in their children's lives. If they have a brother or a brother-in-law or close friends or anybody, they can be involved. Fathers and men tend to approach children a little bit differently, and so there might be some news there for single mothers.

Now again, I'm not saying single mothers can't do a wonderful job on their own. Many do, and the research doesn't challenge that in any way. But you're right. Talking about fathers might make some people feel unappreciated or feel like being insensitive, and it's certainly not what I intend.

**MCGONEGAL:** You found a dearth of research on fathers compared to the mounds of research been done on motherhood. I like the reference to the early studies on parenthood, where the researcher would put down the pencil when the child was handed back to the father.

**RAEBURN:** Right. There's one great example of it. The lab notes detail all the interaction between the baby and the mother, and the last phrase in the lab notes is child handed to father-- end of observation, the end of notes.

**MCGONEGAL:** And what you found is terrific. We've had 60,000 years of human history, and really only 60 years of qualitative good research on fathers.

**RAEBURN:** Yeah, that's right. I think there's a reason for that. We all know that you know that 100 years ago or so, psychoanalysis was on the rise and Freud was increasingly recognized as an important figure. After Freud, there was a figure that's a huge figure, if you start to look at

families, a man by the name of John Bowlby, a British psychologist. And he developed what's called attachment theory, which became hugely influential and gets more citations in the 20th century to his research than Freud himself does.

Bowlby's attachment theory was the idea that for a child to grow up emotionally healthy, it had to have a strong bond with its mother. So that pretty much prejudged the case right there. And on into the 70s, attachment theory-- the 1970s-- attachment theory was still the predominant controlling factor in how people thought about families and mothers and children. And of course, fathers were not part of that at all.

And one of the very first studies in the late 70s by a Cambridge psychologist named Michael Lamb, who's mentioned frequently in the book, was to look at how fathers play. And this is one thing that people know about fathers research is that fathers play differently with their children than mothers do. Mothers tend to engage in more structured play, play with toys, and so forth. Fathers tend to roll around on the floor, wrestle, tickle, whatever it might be. That's a shortchanged version of it, but I think most people will recognize that.

And not always true. Every time I say that, my wife says, well, I roll around on the floor, too. But in general, men have a bit of a different style. That's something we know now. But somebody had to go and discover that. So Michael Lamb, these experiments where researchers would look through a one way glass and watch interactions, he says, let's put some fathers in there with the kids and see what happens, because nobody had done that, because we knew fathers weren't interesting.

You know, we quote, "knew," unquote, that fathers weren't interesting. It's an example of what I think I said before of trying to sweep away the myths about fatherhood and look at what's really going on.

**MCGONEGAL:** No species is exempt in this book. We hear about marmosets and Emperor penguins. And yet you discover in researching about fatherhood, a lot, it seems, about mothers, too. Was there anything that surprised you in your research about motherhood?

**RAEBURN:** I did look at the amount of time that mothers and fathers spend on family activities. And we often hear-- we hear a couple of things. We hear that mothers spend much more time on child care in any given week than fathers do, and we hear that-- we do hear that fathers are spending more now than they did a couple of decades ago, but still not spending as much time

as mothers do.

And so that's an interesting thing and makes you think that fathers ought to do more. But if you do the numbers a little differently and say, what is all the work that mothers do, paid and unpaid, and what is all the work that fathers do, paid and unpaid, then it turns out in both cases, mothers and fathers work on average about 53 to 54 hours a week.

So they do different things. Mothers spend more time in housekeeping and childcare, but they both work about the same number of hours. So I think if we want to have fathers spend more time with children, as I think some mothers would like to see, then we need to rearrange things and look at the picture more broadly, not just look at the work that's done at home, but look at both parents, all the work they do in the home and outside of the home, and try to see if we can mix that up in a way that makes for a little more equitable system.

**MCGONEGAL:** You've done a lot of work in this book towards, for lack of a better term, fathers' rights, fathers challenging the courts to get a right to be in the delivery room, to challenging stereotypes.

**RAEBURN:** I wouldn't say I champion fathers' rights. I'm glad that fathers got the right to be in the delivery room, let's say. I'm glad that fathers-- this wasn't too long ago-- that fathers earned the right to be in the operating room during a C-section. There are a lot of things that I think fathers are now are more involved, and I think many mothers are glad that they are.

We have to be a little bit careful when we talk about championing fathers' rights, because some fathers' rights movements and groups are really interested in a kind of backlash and restoring a father's position as a sort of authority figure in the family and a kind of view of gender relationships and parenting, relationships that I think many of us would not want to go back to.

Many researchers, by virtue of the work they're doing, are challenging some of these misconceptions about fathers, and I think that's a useful thing. The idea is with this book is to get rid of the misconceptions we have about fathers. And once we know what we really know about mothers and fathers, then we can think about whether we want to change the way we divvy up duties in the family or chores, or change policies about maternity leave and paternity leave and all the kinds of things we might want to do. We can't do that unless we have the facts about how fathers and mothers behave.

**MCGONEGAL:** You talk about staying awake with your children at night. I wonder if you could read a

paragraph from that.

**RAEBURN:** So yeah, so this was one night when one of my younger children was just about old enough to sit up, still a baby, woke in the middle of the night crying. And my wife Elizabeth fed him and we tried to console him. This is a familiar experience to anyone who is listening who has children. And it was my turn to take the night shift. He was wide awake in the middle of the night. And so let me just read you a graph or two ago what I said about that.

This is the kind of thing. I remember about having an infant in the house. These sleepless nights seem as though they will never end, until, without warning, they do. The kids grow up and find other ways to console themselves in the middle of the night. So I decided I would enjoy our time on the night shift together.

The research on the connections between fathers and infants is catching up with the experiences many of us have had with our own children. It's nice to know that these feelings of attachment for so long denied by orthodox psychologists are not some delusion, but are supported by the facts.

I don't remember what happened at work the day after that sleepless night, whether I was tired or whether I missed a meeting. But I remember the hours with my son.

**MCGONEGAL:** That's great.

**RAEBURN:** That was my fourth of five children, so-- you know, some of us, it takes us a little longer to learn these lessons, you know?

**MCGONEGAL:** That's right. Go back, Paul, to 40 years ago and graduating from MIT. Was this something you anticipated doing with your life?

**RAEBURN:** Well, I graduated from MIT in 1972 with a Bachelor's in Physics. I didn't really anticipate doing anything with my life at that point. I wasn't quite sure what I was going to do. I got myself a part time job, actually, in the MIT health service, which earned me enough to cover my rent and a few groceries now and then, and tried to figure that out. I wound up after MIT going to music school for a couple of years at Berklee in Boston, which may not be that surprising, because we all know that physicists and music have a very close connection.

While I was playing in bands making an inadequate living, I decided I would do some freelance writing during the day to try to supplement my income. And so I went to the alumni placement

office at MIT. And I walked in and made an appointment, walked in the door and I said, I'm interested in doing some writing. What can you suggest? And a woman whose name I've forgotten, very friendly and said back for a minute and said, nobody has ever come in here and asked me that before.

So at first, she didn't have a clue as to what to do, but she did something that was very smart and turned out to be a huge-- exactly the right thing, and a huge boost for me. She sent me down to the MIT News Office, where I talked to the then director, who was Bob Byers.

He said, well, I could never hire you here. We have experienced people here. And he called me back a couple of months later and said, I have a temporary job here if you're interested. And basically, he took me on and taught me about journalism. That was my journalism school was in the news office at MIT.

And from there, I went to work briefly at the Quincy Patriot Ledger and at the Lowell Sun and the Associated Press. And there I was off and running. But really, MIT, which at that point had very little experience with journalism or journalists, really set me on the right course. It was great. And of course, now MIT has the Knight Science Journalism Program, where it brings in follows every year, a dozen or so fellows. And a number of journalists have come out at MIT, and things have changed. I'm sure the alumni placement office now has lots of suggestions for MIT undergrads or graduates who want to know what to do to get into journalism.

**MCGONEGAL:** And your work in this book is not too dissimilar from your work for the Knight Science Journalism Tracker.

**RAEBURN:** Right. So my day job, so to speak, is being the chief media critic for the Knight Science Journalism Tracker. I'm in New York. The tracker is based at MIT, and I deliver my word from here. And what we do is look at science journalism and science coverage, where it's done well, where it's done poorly, and why, and try to make our contribution, or MIT's contribution to improving the state and the quality of science journalism in this country.

**MCGONEGAL:** If you had all of the research capabilities of MIT at your disposal, to what angle would you direct its attention in research about fatherhood or parenthood in general?

**RAEBURN:** You, know MIT's psychological research is very science-based and quantitative and makes use of MIT resources in a lot of different ways, a lot of resources that other research institutions don't have. And I think there's so much more we need to learn about the structure

of the brain, the reasons that fathers behave differently, or reasons the way that they behave the way they do. MIT is the kind of place that's well equipped to do that sort of research.

Also to create a bridge between animal research or research with mice and rats, who have very interesting parenting strategies-- some species do, anyway-- and look at what that tells us about human beings. Unfortunately, even at MIT, it's not considered ethical to slice open fathers' brains and study them and see what's going on. So we use rats and mice to do that kind of thing. And I think potentially, MIT could do a lot. MIT does have a lot of great neuroscience and psychological research. So much of that is indirectly related and may at some point shed a lot of light on the issues that I'm concerned with.

**MCGONEGAL:** Talk about what books you're reading right now that you're excited about.

**RAEBURN:** Well, I'm reading a very interesting book, but it is a 10 or 12-year-old book, called *Unconditional Parenting*, by a writer named Alfie Kohn. Now, this does for parenting advice what my book does for fatherhood, in some respects. And that's to really look at how we parent, how we deal with rewards and punishments, and a very different view of that. And it says that we want to be careful about too many stickers and stars and balloons and presents for doing well in school, and we would do better to work with our kids and talk to them and explain to them why doing well at school is its own reward. I know it sounds like one of those things that's easier said than done, but I'm finding that book very interesting.

**MCGONEGAL:** Well, my thanks to Paul Raeburn for joining us to discuss his new book, *Do Fathers Matter? What Science Is Telling Us About the Parent We've Overlooked*. You can find the book, which publishes on June 3, available at amazon.com, or at your favorite local independent bookstore. Paul Raeburn, thanks for joining us.

**RAEBURN:** Happy to be here, Joe. Nice talking to you.