

Dr. Laura Roberts ([00:03](#)):

Hi, I am Dr. Laura Roberts, Editor-in-Chief for the books portfolio of the American Psychiatric Association. And welcome to the APA Books podcast. Welcome everybody. Welcome back to Psychiatry Unbound. Our guest today is Dr. Lawrence Fung, and actually, I should say Dr. Dr. Lawrence Fung. He is a neuroscientist and a psychiatrist and child and adolescent psychiatrist with specialized expertise in autism and this emerging field of neurodiversity, which he is really helping to lead, maybe leading in our country.

([00:43](#)):

Dr. Fung is the director of the Stanford Neurodiversity Project, which strives to uncover the strengths of neurodiverse individuals and help them utilize their talents to increase innovation and productivity of society as a whole. And I love the project because it begins to reframe our understanding of the remarkable qualities of people across many different natures and ways of life. And I think this project really stretches us beyond a clinical paradigm to think about strengths-based strategies for understanding the experiences and strengths and qualities of people we encounter in our work.

([01:27](#)):

Lawrence, you talk about how you're the father of a neurodiverse teenager and that this has been part of your inspiration. I'm excited about talking with you, not only about your scientific work and clinical work, but also, what has inspired you in this work. But today we're going to talk about your book for the APA Publishing portfolio on neurodiversity, it's entitled Neurodiversity: From Phenomenology to Neurobiology and Enhancing Technologies. It's an amazing book. You did a great job. I'm super excited to talk with you. Maybe, Lawrence, you could just start us out by telling us why did you think that the world needed this book on this particular topic?

Dr. Lawrence Fung ([02:13](#)):

First of all, I'd like to thank you Dr. Roberts for all the encouragement over the years on my career development, and also, encouraging me that this field of neurodiversity is a worthwhile direction for me to pursue. So this book about neurodiversity is really about articulating the concept, this concept, and it is about accepting the differences in how our brain works and how our behaviors are shaped. And these differences are really part of the normal variation of the human population. The concept is really enhanced by the strengths-based model of neurodiversity, which provides us a framework to maximize the potential of neurodiverse or neurodivergent people based on their strengths and interests. And this model also enhances the engagement of other stakeholders to support neurodiverse people in various settings. This book further articulates how this strength-based model of neurodiversity is applied to the neurodiverse community in general, but special emphasis have been put on autism, attention deficit hyperactivity disorder or ADHD and dyslexia.

Dr. Laura Roberts ([04:00](#)):

Lawrence, let me ask you then. So when you think about the readers of your book, who are you hoping will read this book or be able to apply some of these core ideas to their work?

Dr. Lawrence Fung ([04:16](#)):

The primary audience is clearly our mental health providers, psychiatrists, psychologists, and anybody that's in the field of mental health. Furthermore, educators and employers can benefit. Some of the chapters may be kind of different from what they typically read, but some of the first chapters in the

book are very readable by educators and employers. So whoever that want to know more about neurodiversity and really wanting to build an environment that's neurodiversity-friendly.

Dr. Laura Roberts ([05:08](#)):

So you commented a little bit on the structure of the book. Maybe you could just help our listeners understand, when they pick up your book, how you structured it and what topics you cover and what applications you hope people will begin to engage in because of reading the content of your book.

Dr. Lawrence Fung ([05:30](#)):

So this book has 11 chapters. First couple of chapters are about neurodiversity as a new diversity and how the strengths-based model is shaped. And then, a few specific chapters are dedicated for each of the neurodiverse conditions, autism, ADHD, and dyslexia. And then, after that, there are chapters that are really dedicating the critical view on how these examples, autism, ADHD, dyslexia, how these examples can be viewed more practically in educational settings as well as employment settings. And because I am a scientist before doing all of this, and I really want to think about the neurological aspects of neurodiversity, so there's a chapter on the neurobiology of neurodiversity. And at the very end of the book, basically, there are a couple of chapters that use the technological angle on thinking about how neurodiversity can be promoted, advocated, and also, be made and use technology to make things better for neurodiverse individuals.

Dr. Laura Roberts ([07:19](#)):

Could you just give a couple of examples of that, of how technology can be used to either support or allow for the application or maybe even augment the strengths of people with neurodiverse qualities?

Dr. Lawrence Fung ([07:40](#)):

The very last chapter has a description of a particular application called Identifor, which is kind of like a game-based application that allow the user to play the games and along the way, the strengths of the individual can be uncovered. And by asking some additional questions, there are some kind of personality profile or tendencies that are picked up. And collectively, using the technology that involve data from, I think the company uses something that is from Department of Labor that describe all the different jobs that are cataloged in Department of Labor and try to basically match what strains and personality traits would be suitable for a particular job.

[\(09:01\)](#):

So this can be quite powerful, is a very powerful idea, is a kind of an early attempt of doing this in this fashion. So definitely, it's still kind of young in terms of how this application is being used, but if, over the years, we can use some similar concept on various different applications, could be as early as, like in education, if a neurodiverse kid need to be uncovered for his or strengths, maybe playing games is the easiest thing. And then, the teachers will know what they're good at. And instead of using a deficit model, they can pick up the strengths and utilize the children's strengths to, hopefully, get them to learn better.

Dr. Laura Roberts ([10:11](#)):

Yeah. In fact, you anticipated my next question. I mean, how does the strengths-based approach really differ from, frankly, the more common historical view, which is more of a deficits model? What's the difference?

Dr. Lawrence Fung ([10:28](#)):

The major differences, there are quite a number of them. And I would say, in terms of assessments and the understanding of the condition, the deficit model is more trying to really understand what are the risk factors, what's the pathology.

([10:56](#)):

In the strength-based model, that's really about how we can understand neuroplasticity, how we can understand protective factors, and the biology that's behind, potentially, some of these very similar characteristics. But if we are using some of the more positive approach, we may be able to characterize the characteristics, say, with autism, instead of thinking about perseveration as a symptom, it can be persistent if the results are good. So this is kind of one layer.

([11:52](#)):

And the other layer is about treatment and intervention. What we potentially can do with the strengths-based model would be to use some of the psycho-educational approaches to be a little bit more preventative instead of reactive in seeing symptoms, and using medications and psychotherapy to correct for the symptoms.

Dr. Laura Roberts ([12:37](#)):

Maybe I'm wrong, but I imagine that when you're working with neurodiverse individuals and their families, that there's a sense of relief and affirmation with a strengths-based approach, more of a sense of possibility and opportunity than some of the more traditional clinical approaches, but maybe it's just hopeful thinking on my part. Has that been true to your experience?

Dr. Lawrence Fung ([13:03](#)):

Yeah, absolutely. When I work with my patients, clearly, I acknowledge their suffering if they are having a lot of issues, but if we are really trying to find their strengths and use that as some of the substance that they can use to make things better for themselves, they feel like their identity is no longer about a condition, it's really about themselves as a person that have such strengths. And that could be resilience, it could be more like the detail-orientation, whatever they gravitate toward.

Dr. Laura Roberts ([13:57](#)):

Have you seen some changes in some of your patients' lives because of this different approach or have you had some outcomes with it? Without getting into identifying details, but any examples that you can illustrate for our listeners?

Dr. Lawrence Fung ([14:16](#)):

Yeah, so maybe I won't name my own patients, but I would give examples of what I observe from the work that I'm doing with others and what I observe in some of the companies that have used a more like a strength-based approach as well in their specialized employment program that would allow autistic individuals to work in their midst. Some of them are working in the best companies in the world and they are not only able to become an employer, they are some of the best employers.

([15:09](#)):

One example is in one of the companies called SAP, and they have one of the first successful programs, actually it's also described in the book by Jose Velasco. He had worked with an individual that, initially, this person has very good organizational skills. And at one point, because of personal experience, some

things happened in his life, he became homeless. And he was very desperate. But at one point, this individual got an opportunity to be interviewed and because he is allowed to try to figure out what he's good at and the company has people that figure out that he actually can organize things, not only in the old way that he was doing, he can actually organize things in other ways that are very beneficial for their projects. And now, he is a very successful contributor in the company.

[\(16:29\)](#):

More recently, there are also autistic individuals working in SAP that just won an Innovation Award, a very prestigious award that's usually awarded to groups or departments within the company. This is one of the very first time that this award is awarded to a single person. So autistic individuals can think very differently and they can contribute a lot.

Dr. Laura Roberts [\(16:59\)](#):

Yeah, no, it's true. I think, in this world, we're so much more appreciative of how innovation is the key to the future. And innovation is the key to positive change. And so, this whole idea of neurodiversity, the paradigm shift that underpins this idea of neurodiversity, to me, is very exciting. And it isn't just for the individual or the family, it's really got broader value for society as a whole, and as you've described, for large employers or creative employers where they'll make a commitment to support neurodiverse employees.

Dr. Lawrence Fung [\(17:41\)](#):

I would like to go even one step further and saying that, the large companies, definitely, they can catch people's attention very easily. We really think that we're not only wanting to cover for the people that are able to work in the biggest companies, we think that there are a lot of very talented people who are neurodiverse that choose to work in other settings. And the United States workforce has about only 20 to 30% working in large companies, so that means 70% or so of people in general in this country are working in small to medium-sized companies. So in order for the neurodiverse community to be contributing to the society, we are really thinking about this as more of a concept that should be practiced in, not only large companies, but in other smaller organizations, animal sanctuaries, small mental health clinics, small architecture firms, et cetera. So this is really our attempt to really help people learn, to a place that they like and they are passionate about.

Dr. Laura Roberts [\(19:19\)](#):

So we've talked a little bit about how this book would be of value in thinking about the experience of neurodiverse individuals and school and employment settings. What about in the context of the family lives? How does this book address those kinds of issues?

Dr. Lawrence Fung [\(19:45\)](#):

For a long time, the families that know about their children who have diagnosis of autism and who have diagnosis of dyslexia or ADHD, the first thing that they would do is to try to listen to what the professionals are going to say. A lot of the time, a deficit model have been used because it's been how we operate for a long time.

[\(20:24\)](#):

On one hand, it is really important to not let things slip, and there are things that we still need to correct for, but there are a lot of opportunities for the strength-based model for the families to know. As a father, one of the things that I really believe in and my wife also believes in is we want to believe in our

children and we want to figure out how we can bring out their resilience, their strengths. And if we can use the strength-based model as a template to help professionals as well as family members, they will be able to be in tune to think about how to acknowledge strengths.

[\(21:17\)](#):

And some of the examples that I have in the book, in the chapter on the strength-based model of autism, I described how Leo Kanner who initially coined the term autism and described the first 11 cases of children on the autism spectrum, he already started talking about strengths in terms of memory skills and musical abilities, and over time, people are losing track. But actually, the diagnosis of autism, initially, was not meant to be all about deficits.

[\(22:03\)](#):

So the other thing is about the entire spectrum of autism is very heterogeneous and there are some individuals who have intellectual disabilities. And what we see in the literature is that there are not only examples of people on the autism spectrum without intellectual disabilities that can have all those gifts, it's really the entire spectrum. There's a few other studies that describe how individuals on the spectrum, even with intellectual disabilities, can display a lot of very unique strengths and musical abilities and the artistic abilities. And all of that can only be known if we look for them because these children don't really tell us, and many of them may be even nonverbal.

[\(23:09\)](#):

So if we are able, as a family members, to always not give up hope. And even though there are obvious challenges if your child is not talking, but if there is always a desire, a motivation to bring out the strengths of children wherever they are, they are going to show us something special.

Dr. Laura Roberts [\(23:45\)](#):

That's lovely. It's really much more holistic, it's much more appreciative of the individual as a whole person, not just as a collection of individual traits. Really, really inspiring work. You have a little bit of a unique background. Do you mind sharing a little bit about your scientific training and then your clinical training and then how you moved into this area?

Dr. Lawrence Fung [\(24:14\)](#):

Yeah. So I was a chemical engineer by training. So initially, I was thinking that I would go to medical school, but because my family was only going to pay the college education, and if I went to graduate school, the graduate school actually paid me instead of I paid the tuition, so I thought I would just get a PhD in chemical engineering doing something that is related to healthcare.

[\(24:55\)](#):

And I got my PhD studying how anti-cancer drugs are released in the brain from some vehicle. And this is actually one of the standard treatments now for refractive glioblastoma multiforme. And this technology was really championed by Dr. Henry Brem at Johns Hopkins, and Dr. Robert Langer at MIT, and my advisor, Dr. Mark Saltzman at now Yale.

[\(25:44\)](#):

And after doing that PhD project, I went to the industry and I thought that this will be a very good way of helping a lot of people because the innovation of pharmacologic treatment seemed to be something that I feel relatively comfortable with, but I just never felt like my career is complete. And my wife kept on telling me that, "Why are you telling me about wanting to see patients all those years?" And then, she said, "Maybe you should just go to med school." And then, I did.

[\(26:36\)](#):

And then, I thought I would kind of follow what I was doing in doing something that's related to brain cancer because that's related to my PhD thesis. And in my third year of med school, my first patient, my first clinical rotation was in child psychiatry. And my first patient basically have behaviors that are just like my son. My son, at the time, is four years old. So that's basically the turning point, instead of getting into oncology, I decided that I would get into psychiatry.

[\(27:28\)](#):

And then, so happy that I, along the way, have met different people, from Judy Rapoport and NIH and then, came to Stanford to meet you, Dr. Roberts, and Dr. Harden, and Dr. Allan Reese, and Dr. Carl Feinstein, many others that have really shaped my understanding of autism in all sorts of ways and also mental health in a more general a way. So that's a kind a torturous, atypical path.

Dr. Laura Roberts [\(28:21\)](#):

Well, an inspiring one, I would say, Lawrence, really. And you have my admiration and I'm sure the admiration of our listeners as they hear that. We all had some turning point, some spark where psychiatry spoke to us, and yours is a very, very powerful and inspiring story. So thanks for sharing that.

[\(28:43\)](#):

Just going to return to the book for just a few minutes. And one of the things that I like about the book is, oh my gosh, you've got Temple Grandin putting a comment into the book, and you had wonderful, wonderful authors. What did you enjoy about developing this book?

Dr. Lawrence Fung [\(29:04\)](#):

Yeah, I think it's just a lot of fun to be able to write something that I have in my mind for a long time. I just never really thought that I would write a book until you, Dr. Roberts, told me that this may be a good idea. And that first, other than initially having that really liberating feeling that, now I can write it all on paper, I don't have to capture all of this in my brain, and I can share this in this way.

[\(29:57\)](#):

And the other really fun thing is to be able to speak with all the different authors who have very similar way of thinking about things like Dr. Michael Wehmeyer, he's the Department Chair of Special Education in University of Kansas. He wrote this chapter on positive psychology in the book. And we really treasure so many values, very common values between us. And I invited him to speak in the Stanford University Summit last year, and that's really a really wonderful way of learning about his work. And now, we're actually trying to be collaborating in various different ways.

[\(31:06\)](#):

So I think it's just a really enjoyable experience to work with really remarkable people in the field that, in the past, I would be reading their work. And because of this book, I got the very reasonable opportunity to invite them to be speaking with me. So this is really quite a privilege in generating all these connections.

Dr. Laura Roberts [\(31:44\)](#):

That's wonderful. So Lawrence, I would also say that the field of autism, the autism spectrum, I don't know if neurodiversity itself is as controversial yet, but I know there are a lot of controversies. And I know that people in the field who are grappling with these controversies suffer too because you want to

honor the people you're serving and you want to honor the intellectual basis of this important work. And there really are a lot of different societal attitudes out there. How are you navigating all of this?

Dr. Lawrence Fung ([32:24](#)):

So one thing that I really believe, and I think because of my role as a parent, my role as a psychiatrist and my role as a researcher, that really brought me to be thinking about all different angles that are all equally important. And some of the controversies in the field of autism, one of them could be related to whether or not this is a disorder or is this a trait?

[\(33:13\)](#):

And basically, people on the autism spectrum, especially the autistic advocates, they really believe in their identity and they would not want their identity taken away for obvious reasons. They feel very comfortable that they are autistic and they want the society to accept them the way they are. And in many ways, there are a lot of very good reasons to think that this is completely something that we should be embracing.

[\(33:58\)](#):

Only when the parents, for example, who have a child who is non-verbal and is not developing, I was there at one point when my son was not speaking at four, and I would not blame the parents that want to even say that they want a cure because when you're not seeing your child to be developing and you don't know what's going to happen 15 years later, all you can do is maybe panic first and then figure out what are some of the things that can maybe "normalize" what we are seeing in front of the parents.

[\(34:50\)](#):

But this may be thought of as wanting a cure, then what about the identity of people that are embracing their identity? So this is really difficult in many ways to bring the parents to be understanding why the self-advocates are wanting something very different. But what I see is that maybe we don't need to be thinking about one way or the other. If we are really thinking about this is, at the end of the day, we want to see, the parents would want to see their children to be growing up in a way that would be good, whatever trajectory it may be, all the parents would want their children to be growing up in a way that they are happy and they would be healthy and they are, hopefully, going to be productive to the society.

[\(36:22\)](#):

And basically if the strength-based model is going to be used, it can go wrong. And if the self-advocates can think that whatever we are talking about in the strength-based model should be very much in line with what they are talking about.

[\(36:45\)](#):

And also, the other thing that can be a little bit controversial is talking about symptoms. So we are not really talking about characteristics as symptoms, rather, we are talking about challenges versus strengths. We can have the same person who is on the spectrum who can be really missing the big picture, and for the professionals, we may be thinking that this is a symptom, but when in fact if that person is using the detail orientation to solve problems like debugging programs or whatever, then all of that, losing the big picture, may not be as important anymore because this person uses the strengths. So the strengths and challenges can co-exist.

[\(38:02\)](#):

So I think that this is how I would want the stakeholders with very different views to think, like we really don't need to have one view and not the other, maybe we can have views that accept both sides.

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Dr. Laura Roberts ([38:26](#)):

And further, that the strength-based strategy or strength-based model can help create a common ground and harmonize, at least, some of the differences. Lawrence, thank you so much for visiting with us today. Thank you for developing this beautiful book and dedicating your professional life to something that's so meaningful to you and to so many people personally. And I'm very grateful to have had a chance to visit with you today.

Dr. Lawrence Fung ([38:58](#)):

Thank you Dr. Roberts, it's an honor to be here. And thank you for all your support all these years.

Speaker 3 ([39:12](#)):

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