

58| Keeping Neuropsychology Relevant: The AACN Relevance 2050 Initiative – With Dr. Tony Stringer

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Speakers: Tony Stringer, John Bellone, Ryan Van Patten



Intro Music 00:00



John Bellone 00:17

Welcome, everyone, to Navigating Neuropsychology: A voyage into the depths of the brain and behavior, brought to you by INS. I'm John Bellone...

Ryan Van Patten 00:25



...and I'm Ryan Van Patten. Today we talk to Dr. Tony Stringer about the American Academy of Clinical Neuropsychology AACN Relevance 2050 Initiative. By 2040, the US is predicted to be a majority-minority nation, meaning that the majority of Americans will no longer be white monolingual English speaking people of European descent. And, with that in mind, as president of AACN Dr. Karen Postal launched the Relevance 2050 Initiative for our field. And, Tony is one of the major champions of this project.

John Bellone 01:02



Tony is a board certified neuropsychologist and a professor at Emory University. He has had a major influence on our field, and we couldn't be happier to have him on today. So, with that, we give you our conversation with Dr. Tony Stringer.



Transition Music 01:17



John Bellone 01:26

We're here with Dr. Tony Stringer. Tony, thanks for joining us on NavNeuro.



Tony Stringer 01:30

It's my pleasure.



John Bellone 01:31

You came highly recommended. So Dr. Anita Sim, who's the current chair of Relevance 2050, and also Dr. Karen Postal, who's the past president of AACN and the originator of Relevance 2050, they both recommended that you're the go-to guy for us to talk to on this area and this topic.



Tony Stringer 01:52

I'm not sure how that happened. [laughs]



Ryan Van Patten 01:53

[laughs]



Tony Stringer 01:56

I will do my best.



John Bellone 01:57

[laughs] Well, I've heard you talk before and give lectures, so I think I understand why they recommended you.



Ryan Van Patten 02:03

We're in good hands.



John Bellone 02:04

We're thrilled to have you here. So, to start, can you give us an introduction to Relevance 2050? What was the idea behind it? What's its purpose?

Tony Stringer 02:15

Well, Karen Postal deserves the credit. You know, she is quite a visionary leader and was very much a visionary president of the American Academy. So this is really her idea. But, the basic notion is that the American demographic is changing, the population is shifting. It's anticipated by 2050, if not sooner, that we will be a majority-minority country. That is that there'll be no dominant minority group, no dominant group - we will essentially be a nation of minority groups. So, with those changes, Dr. Postal, in particular, was estimating that 60% of the American population will be "un-testable" by 2050. Now, I actually disagree with that slightly. I wouldn't so much say that they will be un-testable, but I'd say that there will be limited ways in which neuropsychological testing will be useful for significant segments of the population. I think there are still things we will be able to do, even if our test didn't evolve. But the point is that we stand to lose substantial market share if our tests don't change. And even more importantly, for me, we are not going to be able to be as helpful to patients. And that's a justice issue. It's not just a market share issue, it's an issue of justice. If we don't have the tools that are necessary to serve the population, then we can't address the neuropsychological - the cognitive, behavioral, and emotional needs - that are present in people with neurological disease. So we have to evolve with the evolution of society.



John Bellone 03:50

Right. And that concept of justice is that we can equitably deliver our services to people of all backgrounds. I wanted to follow up on something you said about individuals being un-testable. Can you talk a little bit more about what might make our evaluations difficult to use for those populations?



Tony Stringer 04:13



Sure, yeah. There are a number of issues that arise here. The first, and perhaps most obvious issue, is the issue of norms. If you are from a non-western background, if you're an immigrant to this country, the norms that we have available for most of our tests may not apply at all. So how to then make an interpretation of the test results if you don't have that kind of normative basis? The other issue is that there may be linguistic and cultural issues that serve as barriers to someone being adequately evaluated as well. So, if English is not your first language - with some of the immigrant populations that I've seen English is maybe their fifth or sixth language - so, if you've got that many languages between you and the language that the test is administered in, then that's a substantial number of hurdles that you have to get over. And then, finally, just the cultural issues that are involved here. Cultures place different emphases on how you interact in a clinical situation or in a test situation. There are some cultures where the premium is on maintaining a sense of stoicism, not being very revealing, and not necessarily putting out the kind of effort that we expect from our patients when we're trying to administer a complex battery of tests. So all of those factors potentially can get in the way. And we have to factor those things in when we are looking at the kinds of tests that we're going to need to serve the American population.



Ryan Van Patten 05:41

Yeah. So considering all those issues that you're mentioning, Tony, how relevant is neuropsychology in the US right now? How would you grade our overall relevance?

Tony Stringer 05:50



Well, again, I think the question is more nuanced than that. This is why I don't make the argument that people will be un-testable unnecessarily, but I do think that there are limitations on the kinds of testing that you can do. So what would be un-testable would be, for example, a patient from an immigrant background who may have a cognitive issue that would get in the way of working in certain types of employment. That's the kind of testing we won't be able to do. Testing for educational placement, again, would be the kind of testing that would be difficult to do. I would argue, however, that even with less than optimal tools there's some things that we can still do with our battery of tests. Diagnosing a brain tumor or being able to define the characteristics of a stroke - I think those are still within the realm of possibility for us, even necessarily without our test evolving. But, again, those are only limited instances in which we're called upon. And so to really be able to serve the population broadly, we do need to change or at least expand our toolkit.



Ryan Van Patten 06:56

In those types of situations where we don't have great norms or great tests for a particular patient, maybe an immigrant, or maybe there's a language barrier to some extent, what role do you think that qualitative observations or bedside behavioral neurology type testing might have?



Tony Stringer 07:15

Yeah, it's critical. And, in fact, that kind of training, I've noticed in students recently, they're not getting as much in that area as I think was the case for my generation of neuropsychologists. You know, the old story they got told by Edith Kaplan was the idea that if you are on a ship and it gets wrecked on a deserted island, and there's only you and one other survivor, and you don't know whether they had a brain injury or not, and all you got is a sheet of paper and a pencil. If you are a neuropsychologist, that's all you need to answer the question.



John Bellone 07:50

[laughs]



Ryan Van Patten 07:50

Yeah.



Tony Stringer 07:51

And, really, those kinds of qualitative clinically-based assessments are an important part of our toolkit. There are certain things which are very salient in a person's performance that you can see even through a less than adequate cultural lens. So, I do think that we'll still have usefulness. But, again, the idea is to be able to serve the American population with the full range of problems that they bring to the neuropsychologist's office, and, to do that, I think we definitely have to expand our toolkit.



John Bellone 08:24

It'd be great to hear a bit about each of the subcommittees. Just a brief overview or summary of what each of them does. We'll be talking about the Houston Conference Guidelines Call to Action subcommittee a little bit later, so we'll hold off on that one for now. But for each of the other subcommittees, if you wouldn't mind giving a broad description. We'll start with maybe the Tools and Norms subcommittee. What's their purpose and what are they working on right now?

Tony Stringer 08:52



Sure. Yeah. Well, I think one thing that's important is to think about this in terms of strategy and tactics. So the committees really represent the tactics associated with the Relevance 2050 Initiative. The strategy that we have for evolving neuropsychology involves coming up with new assessment methods, new training models, new continuing education models, and new clinical strategies for neuropsychologists to access at any point in their career. The committees really are the way in which we implement those strategies. So Tools and Norms, it's kind of a tactical effort to develop new assessment methods. In terms of looking at accomplishments of these committees, I mean, the committees are at various stages in their work. Probably the biggest proposal that came out of the Tools and Norms subcommittee was for a book that would be essentially a compendium of culturally appropriate norms. That's an interesting idea but it did run into copyright issues, and so that really hasn't gone forward. But it may eventually exist in some fashion that allows a way to maintain the original copyright privileges.

Ryan Van Patten 10:03



Is that related to or separate from the book that you volunteered to develop as chair of the Publication subcommittee?

Tony Stringer 10:11



The proposal I came up with is a different proposal.

Ryan Van Patten 10:13



Okay, different. Okay. We'll save that. Okay, so then moving on. We'll talk about each of these subcommittees briefly. The summary of the Tools and Norms subcommittee was helpful. So how about the Diversity Award for Posters subcommittee?

Tony Stringer 10:26



Yeah, well, I think the answer is kind of embedded there in the question.

Ryan Van Patten 10:30



[laughs]

Tony Stringer 10:30



I mean, that committee does offer an award for the best poster addressing a diversity issue. It was issued for the first time in 2018. It's a cash award, which is

nice, but it's not necessarily cash in hand. It's essentially that you get a free workshop at the next conference, but there's also the honor and the recognition that goes with it. There are other posters that receive honorable mention as well.



Ryan Van Patten 10:52

So this is a poster that somehow incorporates diversity into it.



Tony Stringer 10:57

Yes, that's correct.



Ryan Van Patten 10:59

Okay. And then the Student Pipeline subcommittee?



Tony Stringer 11:02

So, it's one aspect of our effort to really aggressively recruit people who bring greater diversity into the field. This particular committee is trying to reach students to inform them about neuropsychology, to think about this as a career direction. So they hosted a webinar series on board certification and on culturally responsive supervision with the idea that if you have supervisors who know how to work well with people of different cultures, you will make it easier for people to find their way in the field.



John Bellone 11:34

Excellent. And so, yeah, there are several more we'll go through. And just to bring it back to the reason we're talking about this - this is how the change gets made. Right? These subcommittees are really the driving force behind how we eventually become relevant. Right? That's the purpose of these subcommittees in my understanding.



Tony Stringer 11:52

Yeah, that's right. Yeah, these are our tactics. You know, these are the things we're actually going to do on the ground to accomplish our goals.



John Bellone 12:00

Yeah. There's also a Diversity Initiative Workshop subcommittee. I've seen that the Relevance 2050 Learning Objectives have been added to all workshops at AACN and that AACN is providing resources for presenters, slides, and a Be Ready for

ABPP-style kind of listserv. So tell us a little more about all those initiatives that the Diversity Initiative subcommittee is working on.

Tony Stringer 12:26



I think this is a really significant development. We've conceptualized diversity as something that kind of exists in a silo - it's off in one corner. So there might be, at a given conference, one or two lectures specifically addressing issues of cultural diversity in neuropsychology. What this is doing is really centering diversity across all programs. So every workshop, every presentation, has to have one objective related to diversity. Now, that very well could be as simple as saying, "Well, this is an area that's been understudied. We don't know how this particular issue presents across cultural groups." But hopefully, it will inspire people to really think about diversity when they're planning research, and when they're planning workshops. And so that becomes spread throughout the AACN conference. So, yeah, recognizing that this is a shift in perspective. We are trying to provide the kinds of tools that will help people make this transition. So that includes a listserv where people can ask questions, get advice, and share information. We want that listserv to be searchable so that it kind of builds from year to year. But also be a safe space for people to ask questions that they may feel are dumb or, you know, reflect their lack of knowledge. So its a safe place to ask dumb questions if you need to ask them.



Ryan Van Patten 12:47

[laughs]



Tony Stringer 13:29

We all need that for sure. [laughs]



Ryan Van Patten 14:01

John and I have a safe space for asking dumb questions. It's NavNeuro. [laughs]



John Bellone 14:08

[laughs]



Tony Stringer 14:08

So far the questions are very astute. [laughs]

Ryan Van Patten 14:12



I like the Relevance 2050 Learning Objectives being added to the AACN workshops so that cultural neuropsych is not siloed. It reminds me of grad school. Thinking about classes we take as part of our clinical psych Ph.D., it shouldn't be just that we take a diversity course and then don't ever think about diversity issues when we're taking social psych or cognitive psych or clinical assessment, right? It's part of everything we do.

Tony Stringer 14:39



Yeah, I think this is very much a radical revisiting of how we address diversity issues in educating neuropsychologists.

John Bellone 14:47



Sorry, there's a crow that's banging on my window. Hang on one second.

Tony Stringer 14:50



Yeah, I noticed that actually.

Ryan Van Patten 14:52



A crow? I didn't know what that was.

Tony Stringer 14:56



Yeah, that was pretty weird. [laughs]

John Bellone 14:59



He comes at the worst times. While I'm giving the HVLT word list or something, he'll be banging on my window.

Ryan Van Patten 15:07



[laughs]

Tony Stringer 15:07



So you know this crow? [laughs]

John Bellone 15:09



He's a regular here, unfortunately.



Ryan Van Patten 15:11

He has a vendetta against you. [laughs]



John Bellone 15:13

Yeah. Sorry. [laughs] How about the Peer Consultation Network subcommittee? What's their purpose?



Tony Stringer 15:22

So the idea is to develop a network of people that you can call, really nationwide, to consult on issues of diversity as it impacts how you do assessments and how you perform your work in neuropsychology. Those include diversity of language, diversity of culture, racial diversity, and so on. You know, all of us can't be an expert in everything. But each of us can be an expert in something. So the idea is to support one another in our work, by sharing our expertise. And hopefully doing this freely - the idea being that if you give to this network, pro bono, that you can also receive from it as well without a cost. It's not intended to be a way of making money for anyone, it's intended to be really a way of supporting one another in our work.



John Bellone 16:06

And are these available to AACN members? Or who is this available to? How can they maybe get access to peer consultation if they need it?



Tony Stringer 16:19

Yeah. I don't know that I have a definitive answer to that question. What I will say is that, knowing the way that AACN works and knowing what our objectives are, this won't be limited just to AACN members.



John Bellone 16:31

Sure.



Tony Stringer 16:31

I think the intent is to have an impact that will be on the field as a whole.



Ryan Van Patten 16:37

Tony, I'm interested in your Publication subcommittee, and maybe you could also speak to the book proposal that you volunteered to develop. I had the sense that it might relate to culturally appropriate norms or meta norms.



Tony Stringer 16:51

Well, it's actually a bit of a different concept. And this speaks to also why it's just a proposal at this point and not actually a book. I enjoy writing books. I mean, it's one of the activities that I've been able to do over the course of my career and it's something that I very much look forward to. Book publishers are nicer than journal editors, in general.



John Bellone 17:13

[laughs]



Tony Stringer 17:16

What I proposed is a book that would highlight the contribution of people from diverse ethnic backgrounds in neuropsychology. So it's not a book about norms, it's really a book about the people who have entered the field from different backgrounds, and how those backgrounds have impacted their work. The idea is to have chapters from notable contributors, persons of color in neuropsychology. These chapters would not only summarize their work, they would also talk about their lives, their culture, their background, their experiences, and how that has influenced their work. You know, and this really, I think, comes out of my own experiences as a person of color entering neuropsychology at a time when there really weren't very many of us here at all. So it was very much an isolated experience, very much a lonely experience. I think one of the barriers to people coming into the field is not seeing other persons of color in the field. We need to have a critical and visible mass. That's really the idea of this book - to really make visible the people who have essentially pioneered the way into the field, to make it easier for others to follow their footsteps. I talked to one publisher about this, a couple years ago now, and they were not interested in the idea. They didn't see a book like this really being that marketable. I talked with a second publisher, and they are interested in seeing a proposal, and so we probably will go forward with sending in a proposal. I think circumstances have changed now. This was 2017 when I first came up with this idea. A lot of things have happened since then that have made these issues a lot more salient for a lot more people. So I'm hoping that by approaching publishers now with this sort of different context, that there may be a better reception.



John Bellone 19:05

That's an excellent idea.



Ryan Van Patten 19:06

Yeah. It's a great idea. And I look forward to reading the book.



John Bellone 19:10

Yeah. Please keep us posted. We'd be happy to, you know, promote it on NavNeuro as well.



Ryan Van Patten 19:15

We're just a few steps before the book is released, I realize. [laughs]



John Bellone 19:19

Yeah, just write it quick. [laughs]



Tony Stringer 19:22

Well, yeah, some of my previous books, you know, the only readers have been me and my mother. [laughs] We'll have a little bit broader readership.



Ryan Van Patten 19:27

You'll have two more now, at least - John and me. [laughs]



John Bellone 19:31

I think breaking down that barrier, you know, I hear that from students as well, sometimes, especially students of diverse backgrounds, that sometimes there's a sort of a ceiling that they feel like is in place. And once that ceiling is broken, it really leads them to consider those possibilities.



Tony Stringer 19:51

Yeah. I'll tell you something that kind of broke my heart. Just a couple of years ago, I had an intern applicant who was a person of color to our program in Emory and she was an African American woman and when she saw me, she was stunned.

She actually thought that she was the only African American in neuropsychology. Now that's what I thought, you know, when I was entering internship 30 or 35 years ago. So for someone to still think that, to still have that kind of sense of isolation, I mean, that was heartbreaking to me. And, you know, I was able to introduce her to a number of other people, besides myself, who are persons of color in the field. But it can still be a very isolating experience.



Ryan Van Patten 20:30

Yeah, we should give a shout out to the Society for Black Neuropsychology along these lines, which is doing really good work.



Tony Stringer 20:42

They've been doing a lot of webinars, and they just had one actually that they told me had 500 participants, 500 viewers of that webinar. So that's amazing. It's great.



John Bellone 20:50

Yeah. Courtney Ray, I believe she's the president of the organization, she was in grad school with me in my old lab. So, yeah, shout out to Courtney. I was thinking it would be tragic if we lost potential students or people who would have pursued neuropsychology because they didn't see anyone who looked like them in the field. I think that might be another way to increase our relevance is to promote a diverse application pool of students who would eventually become neuropsychologists and make changes from the inside, once they go through the process.



Tony Stringer 21:28

Yeah, absolutely.



John Bellone 21:29

Yeah. Thanks for working on that project.



Ryan Van Patten 21:32

The last subcommittee that we will ask you to describe is the Practicing Neuropsychologists Pipeline subcommittee.



Tony Stringer 21:40

The intent is to encourage neuropsychologists to seek board certification with, again, the idea being wanting to attract a diverse group of people to the process. So it's focused on developing grant proposals to be submitted to ABPP, to the American Board of Professional Psychology, to help defray the cost of board certification for candidates who are from underrepresented groups in neuropsychology.



Ryan Van Patten 22:05

To transition to a few of the changes that have occurred, the accomplishments you might say, of Relevance 2050, tell us about the idea behind the AACN Board of

Directors slate system for nominations and elections of members to the board. This is a bit different from how things were done before.

Tony Stringer 22:24



Well, again, I want to give a lot of credit to Karen Postal for this. This was, again, one of her proposals to the board, which I think has had a huge impact. So even if you're fairly visible in the field you may not have the same following as a person from a European background in neuropsychology. So this is a way, to begin with, to elect more persons of color to be on the AACN board. The other thing it really does, though, is it guarantees that there will be a segment of the board that really has this as their portfolio, that it's carrying the diversity portfolio into work on the board. So by having a slate you're basically recruiting people with this particular area of diversity in mind. Now, there are other slates as well to guarantee that we have people focused on education and training and pediatrics and so on. But, you know, but, in particular, the diversity slate is the one which really is an outgrowth of the Relevance 2050 idea.

John Bellone 23:25



I understand that non-AACN members can also join Relevance 2050. You mentioned before when I asked about who can access the resources, it's not just AACN members that can access the resources but there's also a spot actually on the board, as far as I'm aware.

Tony Stringer 23:47



Well, it's not on the board. So non-AACN members can be a part of the Relevance 2050 committee.

John Bellone 23:55



I see.

Tony Stringer 23:56



So the idea is, again, that we can't do all of this work by ourselves. I mean, the entire body of neuropsychology is a relatively small number of people. They're only roughly 5000 or 6000 neuropsychologists in the United States, and board certified neuropsychologists are an even smaller subset of that. And then, you know, folks who are interested in doing this diversity work are an even smaller group. So the AACN Relevance 2050 committee couldn't do all of this by itself. So the idea is that you don't have to be a member of the AACN board, or you don't have to be a

member of AACN, to partner with Relevance 2050 and be a part of the work of this committee.



John Bellone 24:36

I see. Okay, so would they sit on the subcommittees? They would be a part of the subcommittees? Is that right?



Tony Stringer 24:44

Yes, that is correct.



John Bellone 24:44

Okay. I see. And along the lines of partnerships, AACN has recently partnered with the Hispanic Neuropsychological Society, HNS, which is exciting. Can you tell us a little bit about that relationship?



Tony Stringer 24:58

I think there probably isn't sufficient appreciation for just how much HNS has done in the field. They really have been kind of an engine that has driven a lot of this work. Again, I go back to Karen Postal. She and I both, as well as a number of other people, were at a conference that HNS did a couple of years ago. You know, that conference in lots of ways was life changing. It really was centered on how we train neuropsychologists, and it was a lot more mindful of the diversity issues. And from that conference, I think, grew a lot of inspiration. So this is a partnership that's very natural to form, because HNS has been doing a lot of this work prior to even the existence of Relevance 2050. And, at least I think, to some degree, the genesis of the whole idea of Relevance 2050 probably is inspired by some of the work that HNS has been doing.



John Bellone 25:53

Great. We've had Monica Rivera Mindt on our podcast a couple times. She's excellent. She's the past president of HNS. She's great.



Ryan Van Patten 26:02

Another very exciting and interesting work that Relevance 2050 is doing is what I'd like to talk to you about next, Tony. So there's an announcement of a proposal for an interorganizational commission to update the Houston Conference Guidelines. So first, I'd like to read a brief excerpt from the call to action and then give you the floor to tell us about this. So it says "While not intending to lead, oversee, or

organize the revision of the HCG, AACN's Relevance 2050 committee is appealing to the boards of directors of all neuropsychology professional and scientific organizations, and stakeholders outside of organized neuropsychology to initiate a forward looking inclusive and official revision of the professional training guidelines for the field of neuropsychology." So you are the co-chair along with Karen Postal on the Relevance 2050 Houston Conference Call to Action subcommittee. So tell us about this initiative.

Tony Stringer 27:08

Well, the first thing I want to say is the Houston conference guidelines are not broken. I mean, they have served the field very well, and they continue to do so. But, you know, they're been new developments in the field, and they really require us to revisit and, I think, update from time to time the guidelines even if they are in general serving us well. So amongst the things that have happened, we've broadly adopted a competency-based training model. This is the way we educate in graduate school, the way we educate in internship, and also in post-doctoral fellowship. We've already talked about the changing demographics of America, that's another factor. You know, there was no diversity in the original Houston Conference that created these guidelines. So there were a lot of voices that simply weren't there. The third thing I'd say is there's been a lot of technological development that will impact neuropsychology going forward. So, the advent of things like big data analytics, computerized assessment models - regardless of what you may think about computerized assessment, it does bring a tool into the field that I think is going to be very impactful. So, you know, we really are at a point where it is time to revisit the Houston Conference Guidelines. Not to replace them, I'm very doubtful that that will happen, but really to look at what needs to be updated at this point. And that's not surprising. This is coming out of Relevance 2050, again, with diversity being our portfolio and with that diversity not really being present in the original Houston Conference, it's sort of natural that we will be moving this call forward. But it's not our intent to lead it. The issues are broader than just the issues that Relevance 2050 are dealing with. We've had a good response. We've met with several of the national neuropsychology organizations, we've met with their boards, they've been very receptive to this idea and very much willing to support it. So we are moving towards the stage where we hopefully will see a commission come into being that will actually move forward with planning this conference. We propose a two year time frame for making all this happen. So the idea is to kind of get started with the new year, with these conditions in place to plan the conference, and then to have the conference and the revision of the guidelines in the next year. They may not be the Houston Conference Guidelines. Yeah, it doesn't have to happen in Houston.





John Bellone 29:24
[laughs]



Tony Stringer 29:24
It could happen someplace else.



Ryan Van Patten 29:27
[laughs]



Tony Stringer 29:27
Whether the name changes or whether it stays the same remains to be seen.



Ryan Van Patten 29:30
Yeah.



John Bellone 29:31
Right. The original conference was in 1997, so it has been over 20 years. I think it makes sense that there would be another look at these guidelines or an update.



Ryan Van Patten 29:43
It sounds like the timeline is such that within about two years this conference might happen. And then after that, there would be an updated paper describing them and we could update the guidelines that our training models are using.



Tony Stringer 29:58
Absolutely.



Ryan Van Patten 29:59
Yeah.



Tony Stringer 29:59
By having all of the major neuropsychology organizations involved, and particularly organizations that are focused on training, hopefully they will take these revised guidelines back and the field again will broadly adopt them.

Ryan Van Patten 30:11



Yeah, well, consensus is hard to come by. We spoke with Tom Guilmette recently about the test score labeling consensus, and he described a bit about the process of getting a lot of people together to agree on something, people with strong opinions. You know, it's not easy, but this is very exciting.

Tony Stringer 30:28



Yeah, well, you get one neuropsychologist in a room and you're gonna get 12 different opinions just from that one neuropsychologist.

Ryan Van Patten 30:37



[laughs]

John Bellone 30:38



We'll look forward to hearing more about that as it sort of unfolds. But that's very exciting. So going back to Relevance 2050, we're curious, what's your vision for Relevance 2050? It might be, obviously, like you just said, every neuropsychologist is going to have 12 opinions. [laughs] But what's your vision for it?

Tony Stringer 30:59

I should preface this by saying that I am a part of Relevance 2050, I'm not the chair of Relevance 2050 and it's not my place to say what it should be. So this is very much a personal answer. I can say that I've been nominated to run for the diversity slate on the AACN board. So if I'm fortunate enough to be elected, Relevance 2050 will be part of my portfolio and I look forward to taking this forward. But if you asked me, "What's the field going to look like in 2050? What would make it a relevant field in 2050?" I can cite a number of things.



I think, first of all, the profession will look more like the society it serves in terms of its ethnic makeup. I think we'll have a choice of norms. We'll have a choice of norms based on age, on gender including non-binary genders, education and educational performance, sexual orientation, race, ethnicity, enculturation, socioeconomic class, and other factors. What I want to emphasize is that this is a choice, as opposed to a mandate, of norms. I don't think it's appropriate to say that a particular set of norms are the norms that you must use in a given situation. I can use myself as a personal example. You know, 15 years from now, if someone wants to evaluate whether or not I have MCI, they may or may not want to use African American norms taking into consideration the fact that I'm an African American who had a Ph.D. and an African American who published extensively. So perhaps the

African American norms will be the right norms to use for me, perhaps they will not be. But the point is to have those norms available so that the clinician can make a choice as to what's the appropriate norm to use, and maybe even to look at a number of different sets of norms.

We'll have other approaches to predicting where performance should be, including multivariate approaches and approaches based on multiple regression, so that we can predict test scores. And that won't be limited just to what we do now, which is we predict IQ scores using regression approaches. But, I'd like to see us in 2050 be able to predict performance in a number of cognitive domains beyond just intellectual functioning, using these kinds of regression approaches.

Cultural neuropsychology, in general, I'd say we'll expand beyond just describing how patients with different backgrounds perform on tests that were developed in western countries. That's essentially what we do now. We have the same battery of tests that we're using irrespective of the context. Often it seems that we think that it's enough just to get local norms for a battery of tests that may have very little to do with a part of the world that we are assessing. So what I'd like to see is that we also have an alternative. That we have batteries of neuropsychological tests that are drawn from different cultures and different language backgrounds, and that we can capture that kind of diversity. Right now we have absolutely no idea, you know, what aphasia looks like in different cultures. You know, would Broca's aphasia present in the same way, perhaps, in a culture which has a really strong oral tradition? It may look very differently in cultures where the norm is not to be bilingual, but to be multilingual. Some of the people that I've worked with, in a research context in the Democratic Republic of Congo, speak six languages, and that's not unusual. Even if you have the equivalent of a fourth or fifth grade education, you still are multilingual. That is a very different developmental environment for a brain. And what neurological disease looks like in that brain we simply don't know at this point. So I think in 2050, we'll have a better sense - I hope in 2050, we'll have a better sense of that.

Something else which I think is really interesting, and we've been talking about, the Houston Conference Guidelines apply to North America. But there's interest on the part of other countries, other neuropsychological societies around the world in this idea of revising those guidelines. While they may not necessarily be a participant, they actually are interested in being an observer of what we do and of thinking about the possibility of there being international guidelines. So something I would hope to see in 2050 is that we actually do have some semblance of international guidelines that allow for some uniformity of training of neuropsychologists, really

around the world. Now, the standards have to be somewhat different to take into account the unique circumstances in different countries. And so, we may have reached the point where we have guidelines that sort of step up as countries develop economically and as they develop in terms of the technology. So, the expected training and education also steps up in association with that. But right now, we have guidelines that apply just to North America and nowhere else. And, I think we can do better than that, and I think that will come in 2050.

And, lastly, this is very personal, but I'm hoping that some of our concepts, which I think are antiquated, will have gone away. I would say, in particular, concepts like the traditional view of intelligence. The concept is fraught with potentially racist underpinnings. It's also a concept that I don't think really adequately captures what we see with how people perform an intellectual test. I mean, you talk about like the Flynn effect, you know, this idea that, really, across countries performance on intellectual tests with each generation seems to be improving. You know, you can't account for something like that with reference to a genetic factor when evolution doesn't work anywhere near that fast. So I'm hoping that we'll begin to explore, I think, more fruitful concepts. Perhaps there's a concept like functional brain health, it might be a better concept than something like intelligence. Perhaps what we think of when we're thinking about intelligence really has more to do with the health of the brain, you know, as a whole organ. Maybe that's the concept that can better capture what's going on in this domain. It's very personal. It has nothing to do with Relevance 2050. It's one person's point of view. [laughs]

John Bellone 37:26



I think Ryan and I would probably both agree. We've talked a little bit about intelligence on NavNeuro and specifically MAMBIT. I don't know, Ryan, if you want to talk a little bit more about that. Just, in general, mental abilities as measured by intelligence tests. That's really what we, when we say intelligence, that's really what we're talking about - it's just what these test scores end up being. But there are so many different aspects of intelligence - emotional intelligence, social intelligence, things like that.

Tony Stringer 37:54



Yeah, well, they're also intelligences we don't even really think about. I mean, if you ever see me on a basketball court, you'll know there's a type of intelligence that I lack completely. [laughs]



John Bellone 38:06

[laughs]

Ryan Van Patten 38:10



Yep. I hear you. [laughs] Well, this is great stuff, Tony. So going off of John's previous question about your vision for Relevance 2050, maybe we can zero in on advice you have for the field in terms of recruiting a more diverse applicant pool. So you mentioned earlier that one barrier here, for example, is having people of color represented as neuropsychologists makes it easier or at least less difficult for trainees of color to approach neuropsychology and become neuropsychologists. Anything else you'd like to say about what neuropsychology can do to become more diverse?

Tony Stringer 38:49



I think that the first issue is an important one. It's the issue of the degree to which people coming into the field see diversity already in the field and how much penetrance there is. A second factor, though, I think, is whether or not the field is addressing the needs of communities of color. There are certain neurological conditions that we know impact the African American and the Latinx community disproportionately. We certainly have seen that with COVID-19, but Alzheimer's disease has a huge impact on the African American community. Stroke, you know, has a huge impact. And so seeing the field really being at the forefront of caring for people with those conditions, I think, is another way of inspiring people from diverse backgrounds to come. The other thing I will say is that, if you're a person of color and if you're also from a socioeconomically challenging background, it's a fact of life that loss and trauma may enter your life a lot earlier. Again, I will speak very personally, I lost my father when I was 7 years old to cancer. So that was a hugely traumatizing experience for me. And, at age 7, I decided I was going to be a doctor. Now this is part of the experience of many people from diverse backgrounds, where there are those sorts of challenges that happen early in life, they need to hear about neuropsychology at that time. Now my decision to be a doctor, I made that at 7, but I didn't know what kind of doctor I was going to be until second year graduate school, which is the first time I ever heard about neuropsychology. We need to be reaching that 7 year old who has just been traumatized by something that's happened in his or her family. You know, a segment on neuropsychology as part of an elementary school science course is not out of the question. I've been in this field a long time, I still think it's the most fascinating and the best field that someone could be in. There's no way you can tell me that a 7 year old isn't going to be fascinated by what we do if you present it to him in the right place. So, you know,

reaching students, reaching future neuropsychologists early in the course of their lives, and particularly reaching out to young people of color early in their lives, I think is, again, a critical factor. It doesn't have to start with graduate school or even with undergrad.



Ryan Van Patten 41:11

Yeah, John and I are trying to help in a small way in that regard. We have a book that will be published in January about how to become a neuropsychologist.



Tony Stringer 41:22

Oh, congratulations.



Ryan Van Patten 41:23

Thanks. Yeah. We hope to disseminate it widely to pre-college kids - high school, for example.



John Bellone 41:31

Yeah, there's so few people who know about neuropsychology. You know, even my family members, still, many of them don't know and understand what I do. [laughs]



Ryan Van Patten 41:41

[laughs]



John Bellone 41:41

Unfortunately, you know. But I think getting to kids early, and just letting them know that this is an option regardless of their socioeconomic status or color or any other aspect of diversity.



Tony Stringer 41:54

Yeah, my daughter, when she was in high school, talked me into going to her biology class and talking about neuropsychology because it got her extra credit. Yeah, and it was a fun experience. I mean, I loved doing it.



John Bellone 42:08

You probably converted a couple of kids to neuropsychology.



Tony Stringer 42:11

I may have. [laughs]



Ryan Van Patten 42:12

[laughs]

John Bellone 42:12



Excellent. [laughs] Also, when we asked you about your vision for Relevance 2050, you mentioned global neuropsychology, specifically the Houston Conference Guidelines being applied globally in different ways. We wanted to talk a little bit more about the global presence of neuropsychology. You know, INS, the International Neuropsychological Society, was created in 1967, over 50 years ago. A recent midyear meeting housed people from over 40 different countries. INS is really trying to bring together the global community, but still we're not evenly distributed. There's a strong North American bias in neuropsychology. How do you suggest neuropsychology become more global?

Tony Stringer 43:05



INS has just created and asked me to chair a Justice and Equity task force. And the intent of that task force is to basically create international partnerships to address some of the social justice issues that neuropsychology is well poised to have a role in. So I think a big issue that speaks to what you're saying - you know, if you take a continent like Africa, where there are a smattering of neuropsychologists, the largest concentration is in South Africa but if you leave South Africa there are almost no neuropsychologists at all. How do you start training and spreading neuropsychology in a place where none exists? Well, you have to partner with what is there. So, right now, we're partnering with some clinical psychologists in Rwanda. And there are conversations in place with neurologists in other Sub-Saharan African countries as well. These are folks that know what neuropsychology is, and see a role for it, and realize that it is something valuable, but they don't have the expertise or the knowledge to actually train neuropsychologists. So we're grappling with how do you take the resources of western countries and make those available to the people in Africa, for example, where neuropsychology doesn't exist at all? I partnered with Dr. Suzanne Penna, who I think you actually interviewed on an earlier podcast as well, in teaching two courses in Rwanda, at the University of Rwanda. The purpose of these courses was to do an introduction to neuropsychology. And it was popular enough that we got, I think, close to 40 applicants from which the local professors chose, I think, 17 or 18 to actually take the course. And many of these were willing basically to travel from other countries

to take this course in Rwanda. They were that eager and they successfully completed the course. And that's led to a memorandum of understanding between Emory University and University of Rwanda to develop a master's degree program. So, in answer to your question, I think one of the ways in which we can begin to spread neuropsychology particularly to areas where it's needed but doesn't exist, is to form these kinds of partnerships. Since we were doing everything by Zoom, I mean, education has essentially transformed to something that's done virtually. Now we're actually in a position, I think, to record master courses in neuropsychology in a number of different universities, even a number of different countries. What if we could then take those master classes and make them available in places where neuropsychology doesn't exist as a way of beginning to create a curriculum that will begin to train the first generation of neuropsychologists in other places? So this, I think, is one way in which we can begin to make this kind of spread. But it does have to be an international partnership, we can't sit here in the United States and dictate what neuropsychology is going to look like in Rwanda or Congo. You know, we can provide the resources but they really have to be in the driver's seat in terms of making it work for their specific location.



John Bellone 46:07

Right, we don't want this to be a colonialization of neuropsychology.



Tony Stringer 46:10

Yeah.



John Bellone 46:11

Exactly. I love that partnership idea between University of Rwanda and Emory. That's great.



Ryan Van Patten 46:19

A challenge to thinking about global neuropsychology, as you've touched on, Tony, is the fact that each country has its own training, licensing requirements, of course, cultural and linguistic makeup, healthcare system, population density, etc. But for neuropsych to have a global community, we in the US want to be generally aware of what it means to be a neuropsychologist in other countries. And I, for one, have no idea what it means to be a neuropsychologist in Japan or anywhere else in the world, really, outside of North America. So what do you think? How much education do you think we need about neuropsychology around the world?

Tony Stringer 46:59



Well, I think, of course, it's something that's critical. I think that does happen. INS is the main forum, I think, for bringing neuropsychologists together from around the world. I think making an effort to go to the international conferences, the ones that are not in North America - I mean, there's always one INS conference in North America and then there's a conference outside. My first trip to Africa was to go to the INS conference. Not the most recent, but the earlier INS conference in South Africa. That was a life changing experience. Going to INS in Brazil similarly was a life changing experience for me. So I think taking advantage of those opportunities are important. I think there needs to be more exchange programs as well. You know, the option of doing a study abroad that brings you into a neuropsychology lab in another place, in another country. I think that's a critical piece to internationalizing our field and also making the ideas that we have in common become more broadly known in terms of how they manifest in different contexts.

John Bellone 48:06



And Tony, related to global relevance, you've done cognitive testing with African refugees, if I'm not mistaken. And you developed the African Neuropsychological Battery together with Jean Ikanga and others. Can you briefly tell us about your work here? And then, we'd love to have you on maybe for a full episode in the near future on those.

Tony Stringer 48:30



Well, I would be happy to do that, and happy to come back as well for that. Jean Ikanga was my postdoctoral fellow, my intern originally and then my postdoctoral fellow, and now is a good colleague. Our interns at Emory are required to do a research project and, you know, he took on the task of creating an entire neuropsychological battery for his fellowship research project.

John Bellone 48:52



No big deal. [laughs]

Tony Stringer 48:53



Yeah. [laughs] But yeah. So being from Congo, his intent was really always to go back and become the first neuropsychologist in Congo. He was very interested in how to test appropriately there. So it was clear to us that it wasn't enough just to have norms on tests that may not be relevant. I mean, you give a test, for example, that assesses memory by providing a list of shopping items and those shopping items don't exist in Congo. That's not a very good test.



Ryan Van Patten 49:23

Right.



Tony Stringer 49:25

So yeah, we came up with a battery of tests. They were certainly based upon western tests, but adapted to include content that would be more familiar to a Sub-Saharan African audience and specifically a Congo population. We also wanted to be very low tech. Again, if you've spent any time in Africa, you know that electricity, in some places, is never a certainty. Running water is not always a certainty. So we wanted a battery of tests that would not be expensive to purchase and they can be given under a number of different circumstances. Like if you need to, you can go outdoors and give this battery of tests. It's a comprehensive battery, it takes about three hours to get through the entire thing, although each test is standalone. But it includes a test of attention - and I will maybe just describe a couple of these tests. It includes a test of attention, perception, a naming test, there are four tests of memory, there are tests of problem solving and executive function. Maybe I can describe the attention test and maybe one of the problem solving tests, and give a little bit more detail.



John Bellone 50:30

Sure.



Tony Stringer 50:30

There's a game in Africa called mancala. It's actually become more common here in the United States as well, my daughter learned to play when she was growing up. But, essentially, it's a game board which has a number of holes in it and there's stones in each game board. The idea is to move the stones from one hole to another, until you get all of your stones to home base. So that's roughly how the game is played. It's actually pretty complex - it's not quite as complex as chess, but it's more complex than checkers. So it's a challenging game. But we wanted to basically take the mancala game board and use it as a way of assessing attention.

So what we do is that we place - in a virtual game board, really a flat sheet of paper - we place stones in different positions and it becomes essentially a digit span task for someone who may be illiterate. So the idea is to rapidly count the stones in each well on the board and when the stones are removed, to be able to replicate how many stones were in each well on the board. So using this basic strategy, we can assess simply something comparable to forward digit span and reverse digit span. We can assess vulnerabilities with distraction by using different colored stones and

requiring them just to pay attention to one color of stone. We can even do kind of an n-back task with something like this, where they have to tell us how many stones were present in the previous well every time a certain number of stones are placed in the current well, and so on. So it's, again, it's a way of using a familiar item to assess more complex cognitive functions.

We take a similar approach to looking at problem solving. If you've ever played the game Dungeons & Dragons - and I will say I have not, but I've been adjacent to people who play Dungeons & Dragons - there's a lot of leeway in terms of the rules of the game. The dungeon master gets to make up the rules. Well, there's a game in Africa that's played very commonly in a number of countries using an ordinary deck of cards, where the rules for winning are determined by the person who's dealing the cards. So this creates a great situation for seeing whether or not someone can hypothesis test to figure out what's the winning rule, using not a specialized deck of cards, like the Wisconsin Card Sort, but just an ordinary deck of playing cards and with the cards laid out in a specified order. So this was the stimulus for our creating essentially a type of hypothesis testing and reasoning game that allows us to assess frontal lobe function, in a way that, again, doesn't require purchasing an expensive testing apparatus. You can purchase a deck of cards for a couple of bucks and you've got all the stimuli that you need for this particular test. That's the basic concept. It's been normed now for use in Congo. We collected roughly 500 subjects. We've been able to show the expected age and education effects on performance. We've been able to look at gender effects as well. We've been able to show that it has reliability, test-retest reliability and internal consistency reliability, that's comparable to similar western batteries. And we've also been able to show that it can discriminate with high sensitivity and specificity stroke from healthy controls. We're now using it for the first study of Alzheimer's disease ever done in Congo. So we think it's a good contribution of what will be available to neuropsychologists on the continent.

John Bellone 50:53



And it's super pertinent to Relevance 2050. I mean, we had talked about what we can do to be relevant and creating new batteries, getting better norms, and altering the neuropsychological test process to make it more relevant to the specific population we're looking at. I really love how you and Jean are promoting this Relevance Initiative this way.



Ryan Van Patten 54:34

That's a great example of how we wouldn't just take westernized tests and get some African norms and then use the CVLT. But you are developing tests in the culture in which you want to administer them.



John Bellone 54:46

And then norming.



Ryan Van Patten 54:47

Right. And then norming it.



John Bellone 54:49

Yeah.



Tony Stringer 54:50

Yeah, we have a small study done by another graduate student here in the United States which has compared African immigrants, African Americans, and Caucasians and their performance on the test and we've gotten results that are interesting - whether they'll hold up with larger sample sizes, I don't know. But there are tests that the African American population performs better than the other populations. African Americans tend to be closer to the African immigrants, but they often fall midway between Caucasians and African immigrants on these tests. And then there were some tests, which we found from the battery, where Caucasians and African immigrants perform more alike than either group in comparison to African Americans. So the relationships are complex. I think there's a lot here that can be investigated.



Ryan Van Patten 55:35

Very interesting. Well, in closing our questions for you about Relevance 2050, I'd like to ask for advice for small groups of neuropsychologists or individual practitioners - people in hospitals, universities, private practices - who might be listening and want to help make neuropsychology more relevant in the spirit of the initiative. What can we do at a local level, at a regional level, to increase the relevance of the field and move us toward the vision that you outlined for 2050?



Tony Stringer 56:05

Well, I think an important thing to do is to find out more about the community in which you live. You know, to ask yourself who's in this community? Who comes to

my clinic and does that reflect the local community? I was not aware until recently just how many African immigrants lived in the metropolitan Atlanta area. And, you know, over the past 25 years, I've probably seen three or four. That community certainly has neuropsychological needs, which are not being met by us. I don't think they're being met anywhere else. So asking yourself, who's in the community, who you're serving, who you're not serving, and why you're not serving those folks? What are the barriers that are keeping them from getting to you? And what's the work that you need to do to build bridges to that community so that people will seek out your services or will get referred to you for those services? So I think it's probably the most important thing someone can do at the local level. Beyond that, I think, again, it's educating yourself about cultural diversity issues. Attend AACN and you will get that kind of education because it's going to be a part of every single workshop.



John Bellone 57:11

Great, and they can attend those other conferences, like HNS, and be involved in local community and neuropsych organizations. Excellent.



Tony Stringer 57:22

Yeah, the HNS conference is unique. It is a lot of fun. It's not just a different neuropsychology conference, it's also a different cultural experience. Yes, I recommend it very highly.



John Bellone 57:32

Yeah, they have a lot of fun there for sure. [laughs]



Tony Stringer 57:36

More fun than I'm used to at neuropsychology conferences. [laughs]



Ryan Van Patten 57:38

[laughs]



John Bellone 57:40

Well, Tony, this has been great. We have a couple of bonus questions for you before we let you go, and these don't have to be specific to Relevance 2050 or cultural neuropsychology, although feel free to go that way with them. The first question is, if you had to choose one thing to adjust or update or change about the field of neuropsychology, what would that be?

Tony Stringer 58:02



Well, much of my work has been in the area of cognitive rehabilitation. I think if I were going to change one thing, I would probably make the focus on neuropsychology to be equal between diagnosis and intervention. I think there should be an interventional neuropsychology. And that should be, frankly, a subspecialty that one seeks training in and certification in. So that would probably be the one thing that I would change if I were limited to just one thing.

John Bellone 58:32



Yeah, that's a unique answer. I love it. Ryan, I think in particular, would appreciate it given the lab he used to work in.

Ryan Van Patten 58:39



I worked with Beth Twamley at UCSD for my fellowship. She does a lot of compensatory cognitive training. We spoke to her for NavNeuro, and Glenn Smith. So, yeah, I strongly agree about interventional neuropsych and how important it is.

So our next question, Tony, before you're off the hot seat is: What's one bit of advice that you wish someone told you while you were training or someone did tell you that really made a difference? So here we're looking for an actionable step that trainees can take that they may not have thought of to improve their training and performance.

Tony Stringer 59:11



Well, I have to own that no one told me this. You know, this is something that I came to on my own. But it was an important insight, and I think this is also particularly relevant though to people from diverse backgrounds. It is very important to do neuropsychology your way. Now, again, I'm board certified. I'm the former president of ABCN. I'm obviously invested in the Houston Conference Guidelines. So I believe in training standards and guidelines. But within those standards and guidelines, I think there's a lot of room for individuality. And I think to be successful in the field, particularly if you're coming from a different background than the majority in the field, you have to be aggressive about insisting that this field accommodate your unique needs. This came to me in graduate school, when I decided that the sequence of courses was not working for me. And I went to the chair of my department and said, "Hey, I want to change the program. I don't want to change the courses, but I want to change the sequence in which they're offered. And I don't care if anybody else does it this way, this is the way that I want to do it." And, you know, we had a good relationship so maybe I got away with something

that might be difficult in other circumstances, but he let me do that. He let me, in some ways, design my own course sequence, and that was important for me. I knew the way that I learned and I knew the way in which I needed to adjust the program to fit my own learning style and that helped a lot in graduate school. I've kind of followed that same rule through much of my career. I like to do things my way and I seek out settings that will give me the latitude to do that. I tell my department chair that I'm not at Emory to do the work that he wants me to do, I'm at Emory to do the work that I want to do. And Emory needs to let me do that, or I need to look for another job. [laughs] And, so far, he's allowed me to do that.



Ryan Van Patten 1:01:04

[laughs]



John Bellone 1:01:04

Well, they've benefited from that too. [laughs] Well, Tony, this has been incredible. Thanks so much for taking the time to talk with us.



Ryan Van Patten 1:01:11

Thank you.



Tony Stringer 1:01:12

All right. It's been a lot of fun. I appreciate you guys doing this. I will say I don't know if it matters to you, but my daughter looked you guys up, you know, your podcast when I told her that I was going to be doing this. She listened to a couple of them and came back and said, "Yeah, it's fine to do this, dad." [laughs] You got her endorsement.



Ryan Van Patten 1:01:32

We got her blessing. [laughs]



John Bellone 1:01:34

All right. Thanks so much, Tony. Again, yeah, we appreciate it.



Tony Stringer 1:01:36

Thank you.



Transition Music 1:01:37

John Bellone 1:01:42



Well, that does it for our conversation with Tony. We have upcoming episodes on learning disabilities, fundamentals of human neuropsychology, and spina bifida, among many others. As always, thanks for listening, and join us next time as we continue to navigate the brain and behavior.



Exit Music 1:02:01

John Bellone 1:02:24



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Ryan Van Patten 1:02:36



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