

DEBATE BEGINS

OK, so one of the theories that we brought up was the empathy, yeah, empathizing systemizing theory is an extension done on the theory of mind, and it was aimed to explain the differences between autism and females and autism and males. The initial explanation was why men tend to have a higher prevalence of autism that is either diagnosed or is identifiable compared to women, but that was mainly just a stopping idea and instead the actual content of what they were looking at was to expand from just looking at cognitive empathizing and instead looking at effective empathizing, but also systemizing. And they came up with the idea that you could identify if someone was on the autistic spectrum by measuring affective empathizing and also where they would systemize things. So when it comes to effective empathizing, it would be things like how you would react to in a very emotional experience and rather than boxing it as ohh all autistic people would just have a very cold demeanor about it. It will be looking at how women look at it at how men react to it and everyone in between, but that's the lacking area.

It doesn't really account for people that experience things like gender dysphoria or have variants, and also it looks at why people tend to enjoy things that you could hope you could systemize.

So this would be when people stereotype people with autism for having, fascinations with things like the weather or numerical systems, things like that. Umm. Yeah.

So more specifically, it also dealt with how our perceptions of autism has jaded in our gender views.

So how would, girls and how little boys have their autism come true.

Is that for a lot of cases, for men, for young boys, especially when you have, uh, these obsessions, you have things that you focused on.

They were things like trains or things like mapping.

So these things were perceived as well in the map case, something that's positive.

So it's not something that's bad, hence we don't have to cure.

So it's how a lot of society views autism is something we have to cure, which is the whole idea of the DSM 5 identifying the ASD.

Disorder is something that hits.

They function, but when it comes to women, there are a lot of things that they perceive to be just girly.

So in any any case of, like girls like pulling their hair, called stimming instead of saying that like what is the trick they would view that as or that's just a girl.

They're doing girly things, or that's just a girl, you know, it's just something that they would perceive to be changed in messaging.

Also, something that a lot of girls feel as well.

So for example, something that autistic people feel very heavily is the need to smile.

Or the need to portray a certain emotion because they would have a difficulties expressing emotions.

So when it comes to boys, that's something that you see very obvious, whether or not they express emotion.

But for girls, it becomes a thing.

Every girl is told that we have to express emotion somewhere.

They have to smile in some way.

So girls, grow up goes with autism grow up thinking that.

I've just been taught to smile and I don't feel like it and we go skills ideas.

So instead of viewing it as something that is specific in the autism, it's, they view it as something that is gender specific.

So what we do as a society is that we don't view girls with autism as girls with autism.

We just group them by their gender and just view them as girls.

It is very difficult for us to turn back most autism, like in the future and hence we have this high variability of diagnosing boys with autism as an individual and girls with autism as the group identity of the of their gender.

I think this might also contribute to why autism is like usually umm had the. diagnosed more in boys and girls because girls tend to show traits that are already attributed to their gender, so they might be more quiet, they might be more reserved, they might be more social and this is considered by some by society.

In general, it's something that is normal so.

Umm this might affect the diagnosis of autism when it comes to the emails as well.

And one point that me and Abby were discussing a while back is that, umm, other females with autisms.

Sometimes they tend to show more social engagement, which contradicts with the.

Umm, like the since the already established symptoms of autism, which is they tend to avoid society, they tend to avoid social engagements and stuff like that.

And there's only

Are you looking at the same theory or something different?

Yeah, we're all kind of like the same, the same sort of thing.

That's fair enough, then.

That's OK then, and let's meet this group here.

Other questions or some comments on this?

It sounds very similar to the extreme male brain theory.

No...

It was before that.

So from this theory, we got the extreme male brain theory

Yeah, basically it's the same thing and... between two brain types. The empathising female brain and systematic male, so.

I'm gonna ask a question if I may.

And just like to to to ask where you know, how much, how much easier is it for females to go through life?

You're kind of suggesting that that's that... they say, and that if females go through life a lot easier and that it's linked to stereotypes.

So you mentioned about the, the potential stimulating girly link in people's minds.

Also, I was wondering, did they say something about cultures?

How, maybe in some cultures particularly, or all, umm uh women or and girls expected to be more passive.

So then we're able to mask anxiety or mask things that did it specifically.

Talk about that or, or not.

This is the research was it didn't involve any other cultures.

Yeah, it was just mainly just white subjects.

So when it comes to culture, other ethnicities of their races, there wasn't much research on it.

OK, actually quite none, when I haven't crossed, I haven't come across anything

So that's an interesting point that that you have found. An interesting thing that you have found.

The only one I found was they compared the sentence between Umm sorry black children, also, white ones.

Yeah.

And they just compared to some of them, they don't really compare like what they're what, what causes the symptoms or whatnot.

What factors play?

Yeah.

They don't go into any of this sort of, detail, just comparing.

OK, then.

Did they find something particular about not black and white?

Not not really.

They just.

This uh, this is like very miniscule differences between them, but it's mostly the same, so it's quite it's probably not very good [.....]

Yeah, but I understand the instance.

It's interesting, isn't it, that you know.

It may well be culturally... cultural differences that are playing a part, but maybe.

Also, did they did the study mention?

Uh.

Severity... autism, were they talking about autism, or in general?

So the one of the criticisms here, the theory is that it accommodates more to people with high functioning autism.

It doesn't really explain or it doesn't really accommodate to people with low functioning autism like kind of breaks them up.

But in doing that, it did sort of give us starting explanation for things like stimming.

So it came about the thing of like when low functioning people with autism, they are able to achieve menial or repetitive tasks.

It gives them the satisfaction of this is something I have control over and that might be.

Contributing to why stimming is so prevalent and across severity it's pretty common.

So that was one, but I think...

So, to answer the first question, we come to how girls go through life without actually realizing that what they're experiencing is based in autism.

It was something that we found in one of the papers that was in the suddenly 50 years of my life.

Makes sense that people, yes, it was prevalent that it showed that a lot of the times because we identify ASD as a disorder, which implicates like, it inhibits the function.

And because something come really in keeping your daily function, if you've been living with it for 50 years, right?

And you've already been accustomed to it, and you learn how to mask it.

The difference is in most cultures is that women are already expected to mask and to accommodate for other people, and because of that it allows for more.

Umm, it doesn't make their life easier in any case which is different.

Yeah.

So it makes it difficult to identify them.

This is what you're accommodating for instead of what you're accommodating for.

Being the whole experience of your gender as well, another thing that I thought of, so there's not basically any theory or is that right?

So if something that I thought of because is the thing that we mentioned about how cultures, what we need being back is because in most eastern cultures where things are more collectivistic as opposed to individualistic, here in the West, it's more likely that individuals who grow up in cultures that don't accommodate them, they feel the need to accommodate to the society.

And hence because it's so collectivistic, they just, 'I will fit into whatever they need me to fit in.'

And because of that, uh, it's more prevalent in western societies because they view it as something that, oh, because we're wanting individualistic.

Will try to look for more things that can accommodate to you, like help you deal with this right.

Whereas in eastern cultures or like in more collectivistic cultures, they'll just do that.

'You'll follow us.'

You will have your own incentivizers then to mask that the to accommodate themselves like the and all this helps.

So we could maybe ask the question.

I said I'm not suggesting all Eastern cultures are same at all.

But in cultures where everything would be where there are like as you say, you are set rules and roles and expectations.

Does that... everybody talk, because otherwise..

Does that. support people with medium to high functioning autism by providing that framework that people with autism often say they need, they need to understand what's expected of them and to have more routine.

Maybe, maybe Western cultures don't do that as well?

There's some research to show that Japanese culture makes, like autistic people easier because there's a tendency amongst autistic adolescents and adults, to [inaudible] and repetition.

The rigidity of the social kind of interactions are very structured because the way you should act umm and there's not much deviance from how you would do that.

So for some you would make that day to day life easier, but then if you're talking about like masking, if they have to mask all day and they can't be their true selves behind closed doors, then are they suffering greater than if say in the Western culture as you said things are put in place to make all the like easier without masking so much. Does it overall make life better? Or is it better to constantly have to [inaudible] existing in society then?

You know some of the...Umm spectrum disorders... So one of the problems, one of the aspects connected to autism is communication deficits or behavioural deficits. But if in their own culture, so used to act in the certain way, like how, where does that sort of even come from sort of vibe...to start making sense?

I know what your saying. So you say if the source of autism theories of said is to do with communication and yeah, then where does the disorder come from in cultures that support that? But yes, I see what you mean to say. OK. I think, yeah, you've contributed a lot already. Thank you very much. Yeah, I mean, it's actually stimulated some questions and thoughts. You're [inaudible] as

well. It's interesting to to actually talk about autism in a sort of social, cultural context as well. Thank you for that. Who wants to just talk about a little bit about theory... can we come over to this table maybe.

Umm. And this came...

So what sort of theory... is that the theory that you just mentioned? As you, you could also pointed out out how good it is. How... But it's gonna [inaudible] with regard to who it's looking at. So it does leave a lot of space for other theories to contribute as well. You know there's no one theory that we're going to decide on today, So what can we find over here? I'm looking at you...

So theory of the and so basically what I found is, but there's this.

Judge because they have.

They obviously no, no.

Obviously go through the same experiences, but I think it might be due to the fact that they have.

They may have some [inaudible] that television, this one, and specific tasks.

Obviously they're aware of, so when they have to judge their own respective interest in outside bots in a way.

It has come with a few so I found this that eight 8% of existing changing month they make money stakes when it comes to questioning their respective compared with non autistic ashes adults, not necessarily adults where 97% were correct when trying to request perspective and yes let's see.

Someone else is decided by the yes, yes.

And that you mentioned children and adults, and I think we've spoken before about how it's not just about age.

Yeah, there is... There are differences when it comes to, I think when it comes to changing.

Loads of evidence.

Kind of focus on one specific age range like the issue focus on the adult school children.

There's never really comparison within a piece of like within a report within the study kind of just focuses on.

19.30 I found that most of my research was focused on like specifically answering questions like how well things like psychology can explain experiences....of autism across lifespan.

As Marisa was saying so much research is done specifically on a certain age group and specifically on children. Just goes well from the research I could find. Goes to show the a lot of theories that come up about the whole... I was mentioning about camouflaging and the masking of autism in adults and how adults who've gone through their entire life with autism and maybe didn't know. Or maybe have been practicing masking without meaning to. How it could be...varies completely amongst adults from children, so or so much research is just specific to children.

Umm...I'm just gonna [inaudible] I didn't find as much information on how it's how it how it manifests in adults and how diagnosis like autism is gonna be done in adults compared to in children because it's something we tend to pick up that early stages. But from what I've seen, could be wrong. From the research I've seen, it's something that we struggle to identify at later stages.

The research I found...They looked out autism and elder people [inaudible] and compared it. They give specific details on how we reduce the quality of life, but about that people would overall, especially in older generation and autism and then it reduces their quality of life. But they give the specifics on how and why it does that.

Anyone want to add something to that?

Sorry... As o mentioned, I think the main focus is on children and especially here in the West. At the moment it's considered that ASD is a developmental disorder. And many studies like Apple, 2000, Whitehouse, 2009, [inaudible], 2008, these are all studies have focused mainly on children and mainly like 7 to 14. And ... Even the studies that focus more on [inaudible] manager with adults and also children, there is always a main children's side of things and I think... do psychologists understand the experiences and you answer is yes to an extent.

So you think about like the children's sides, one in such. He mentions that in order to make things easier for children with ASD is by certain schools is to incorporate activities that they themselves find interesting and adding them to their work at school planner out similar to what they are already doing for the... So in that way you just mark interest and so that's what is interesting or human beings we want to be loved, we want to be interested in, you know, and we want to experience it. So even if we have the research on explicitly don't show it as much. It's something you want.

I just want to say... but it's what you're saying.

And that although there are different theories and you have the kind of mentioned particular one here at this point, you're making overarching themes that you think that psychology. theory is contributing to our understanding of autism because it's reflected in practical outcomes and interventions and things is that way also.

I would say so, yeah, it's it's more, it's more the fact that the way we as individuals look at that [inaudible]

As mentioned, we like patterns, we like understanding and as human beings, we want to be accepted and I think human studies try to do that, they like to try and see acceptance or understanding and...there was something else...sorry

That's OK. I just think if you did, you did...did you feel that what you found kind of pulled you in the direction of one or more theories that you think or like, I don't know much about theories?

I didn't think very much about theories

Hmm... Developmental theory?

Developmental theory is as in a general theory. Yes, I just wondered if you had a particular...

Theory in mind?

You know, a particular kind of theory, as we said, OK, you know, I just wondered if I would not know.

I took the question quite literally as it can we understand that was the question. I'm just, yeah, kind of, yeah. That's the one that something. As in like the question itself, can we understand it throughout lifespan? I think as of right now, no. As as you've all mentioned, most of the the focus of our research is on children, and I think that leave the fact that we consider ASD as more of a developmental issue instead of like a local issue, if that makes sense because I think you mentioned adults struggle a lot more and being diagnosed than children from widening significantly more.

Umm, from what I've done, it's the same with... it's the same with girls that like I I would go and say that we we you know, we made massive leaps and bounds and research with autism. Like I feel as if it's it's still very down a particular route girl's struggle from what I've seen that they have a lower rate of being diagnosed. Autism, same as adults do, same as elderly people do. And I think that's not just due to masking or due to changes as the icon here is I think it's due to how it expresses throughout your life because it's some people make their entire way to their life without being diagnosed as some people don't, you know, they get diagnosed in childhood.

Things that theory of mind, the sound and got lots of evidence to support them, but autism like we've only just started, understand the scale of autism and how it just it's just so particularly unique to every individual that any theory or classification or attempt to categorize it is in a way sort of redundant because it's it's such a unique experience for every individual and how they experience and how they present.

Would we say though that research has,...laws and every training and is attempting to find some patterns with gender or something like that? It's good you think that there are theories that are trying to contribute and know things, things that haven't been, yeah.

Yeah.

So, we say that that can be used across age groups?

She would say no. From what I've seen.

In general, across age groups it's hard because like they mentioned, the reason another reason that just from what I've seen with that you view autism as something throughout the age of 7 to 14 as something to either manage or to control. So you don't want it to show up in an adult, which could contribute to why people don't invest as much in research for adults, or it would be very surface level. But on top of that, it's something that I think you know, that Shania also mentioned that a lot of adults say that the process of getting diagnosed when you're older is very harrowing for them because there's no proper diagnostic process in place. It's very much a thing of if we find it, we find it, but we'll keep bringing you back in and it can be very invalidating for people. So when you're talking about understanding because I'm across the lifespan, you have to also consider that people with autism they don't feel good and why, is something wrong with me? Why is it so hard to find? Am I faking it or...

I think it also in general, might contribute to a poor quality of life because having to go through a very hectic diagnostic procedure having to also lies with parents and families about aspects of yourself that you yourself are discovering for the first time and you're quite uncomfortable. It could be quite hard. It could be quite taxing on the person's mental health. They're going contributing to a poor quality of life or office visuals as well, because in some research they did mention that they lack support services to help them come through terms with their diagnosis. The diagnostic procedures are very lengthy and they are often.... umm, just put it on the spot. They're not given any sort of support to come to terms with the fact that they have been diagnosed with autism.

Yeah. Whatever age where we're diagnosed that actually this is the climates around us that impact upon how we see ourselves and you know how people see us impacts our identity, which is really fundamental to a person. I'll try not to do too much talking, but yeah...

I was looking at the ages in the US. They found there are reliable age to be governed by the age of two. Yeah, average age is 5 years of age and the first age of intervention is 4.7 years of age. And that was only a group of.... They tried to intervene before the diagnosis, which you have support in the

US and or or you just seem to be four times as likely, which is already said and the average diagnosis for females 5.6 years of age was like run over the normal.

Which actually supports what you were saying that the the interpretation of behaviours who don't...

And then also as well, I found and the Centers for Disease Control and Prevention and they've done internal survey since the 2000s and what into 2020. So in the 2000 they had 150 people and children diagnosed with autism, and in 2020 from the years is now gone in 36 children like the across the lifecycle. See the more knowledge we have is showing that don't have any more children being like.

I just want to ask you about what we think about when they give us.

Statistics about the average age of diagnosis... what might we be thinking about at that point? The average age of children who have been diagnosed.

I think they found this out and... In regards to that people, children live in a lower income household, are lesser evaluated due to the education and family or being in a low cost environment and they I think it was something like 7 that was the difference which doesn't seem like lot actually when you look at today. The difference is massive in terms of just the income of the household. So then you think, how children are slipping through the net because of the income side effect.

32.53

So you're introducing the more social theory

Right.

Social explanation. We're not saying it's the cause, but you're mentioning that they're they're sort of a social explanation for how autism is seen? But it's it's basically how people are seen as 'being'.

I think that's part of one of the issues with kind of diagnosing autism is that it's seen as a complete disorder and collection of behaviors, whereas these behaviors can exist in the general population as well. And I think another thing that's left ...is that autism can exist as comorbidity to other genetic disorders. So we kind of pigeonhole people. And and I think it's kind of, yeah, this is so because genetics is in it's infancy and they can only tell [inaudible]. Well, we had genetic testing for my son... whereas maybe ends up kind of genetic disorders of... [inaudible]... They say you just don't understand or know about yet?

So again, it's always something that's trying to be cured or fixed and she.... Rather than, like autism is *the* disorder and not the symptom.

That makes sense. Did somebody else...on *this* table mention to the social explanations?

I mean, I've sort of come... so I've got a collection of things that experiments. Yeah, I shouldn't have to like the experiments that [Clayton place] to try to understand. What... What it autism is, and the theories that I came up with were like the people with autism struggle with executive dysfunction. But it's really hard to tell whether that dysfunction is connected to theory of mind or the other way around, if that makes sense. Did I say that mirror neurons in the brain are different for autistic people...umm...

Oh yeah, I just wanted to point out because I was reading the paper by Vivanti. There's a section that says how we view autism through evolving societal views. I think this could explain a bit about why it's difficult to identify autism in adults, especially for the contemporary research we have now. So, umm, according to the paper, prior to about... prior to the DSM 3 or 2001, it was a thing on autism

was defined as IQ points. So in the way you would define IQ points is all your IQ is very low and therefore you autistic. It's very... So something we need to remember when we are reading research for adults with autism *now*, is that they grew up with this stigma or what is appearing that you are have a low IQ point, which is why it's so harrowing...

In some way meant to be deficient.

Yeah. So which isn't true, but it's what they grew up believing about themselves, right? So now when you tell them, oh, you might have autism instead of, it's understandable that they don't view the research, the contemporary research at all. It's not something that's inherently bad, not your IQ, but because they grew up in that society when that was the stigma. It's why we mentioned that this is why it's so harrowing. For that, This is why we don't have a lot of research for the belt scale with autism, because the stigma works there. So I'm wondering whether in a couple of years or like... even now, whether you do research now with the understanding that people in our generation growing up not with no stigma but less stigma on autism, whether we can have more comprehensive understanding. Autism in adults as well, so it's important to identify this, not just autism in adults. It's autism in adults with a childhood that demonized autism. So yeah.

Yeah, thank you for that.

Yeah, that's that's really interesting that it's how do, how do researchers research adult autism, who did they research?

Yeah, but without the children, I think. I think I got a sense of feeling that more research is on children aswell because when someone has a child with autism, that child is impacting their life. So there's a motivation to get that child looked at or seen or diagnosed or whatever to make kind of their lives make more sense and make their life easier as well. So, and, you know, children impact a lot of people's lives where there's the mum, the dad, teachers, doctors, they, all the health visitors, there's regular checkups. So from birth, there's just the sheer amount of people seeing this child all the time. So then..

Do they see this as a problem?

No, I wouldn't say a problem, but seeing that their behaviors might be outside of the societal norms that are expected. So as the child gets older then they go to the comprehensive school (11-18 years) and then they get adolescence then, and so sometimes symptoms that that, especially the people who mask or are more on the higher function spectrum, they are behaviors and then be seen as kind of normative behaviors for adolescents and children go to community and things like that. So that way get a lot more missed, but then it might also enhance their behaviors so they're less able to mask because of the hormonal issues and things like that. So again, teachers and things might put them forward for assessments. And whereas even if they have been accepted in many issues at home in a in a setting where there's more higher expectations of them and with hormonal differences as well, then they would be more likely to be... adjust, but once you.

I think once you get to like an adult and it's with many things, once you hit like 18, not magic number, you're no longer anybody else's problem kind of thing.

So then it's easier if you've been having issues at home.

So if you are teenager with undiagnosed autism, undiagnosed ADHD and you're seen as the problem child at home, you hit 18, you're high functioning, you're first of all, we'd be like 'I'm going to move out' So instantly then you can move out, especially in this country we have the the social

benefits kind of blankets as well. So they can move out, they can get, they can go on benefits and things that which is great for them. But when they do live on their own, they can socially isolate straight away. So, they can just, if they hyperfocus on video games and things like that, they can just shut themselves. They rent these paid, you know, they get in touch with their bills so they can socially isolate. So then, who are the people who will be doing the research seeing these people?

Because they just going to isolate.

I think I think what what you're saying about you, you're really highlighting, all of you, that the real issue that you're all picking up on, is about adults what about when we're older they're and there's a lot of sort of theories for children which you're going to be drawing upon the theories because they they do with children. One more point. I'm going to move on, I'm aware that you've been very patient...

Just a ultimate one side, but you might find is when children move out as we sort of move into new generations and these times of that because they didn't children within autism or ADHD at the moment at the parents house but they moved out there might be more proactive to getting themselves out. Maybe that'll be interesting, like 10 years from now, let's see age range.

Chris., sorry, Chris is talking about, you know, like when you have when you have autism, is like it needs to be visible for some of the even get help and then we get it.

But if you get diagnosed later on in life, you still get embarrassed, sort of like a personal aspect of it.

42.12

And then perhaps or maybe really could be a number of different....you're right to highlight that, but I'm just saying we're individuals, so we will respond as individuals. Sometimes we might grasp that label and think, thank you.

But you can... like going from that as well. There's like... Talking about the diagnosis, which is really good, but then in these theories, like the theory of the mind will like the... Coherence Theory... These theories, they all speak about what problems, people with autism might face, but they don't really talk about how beneficial diagnosis would be. So yeah, obviously that is really beneficial to understand what someone might, how they might behave or the differences they might behave compared to the typical person. But it's so important to understand how important it is to have a diagnosis, because like, there's some articles in the journals that showed that just having a diagnosis takes away that shame that someone with autism might grow up feeling, and I just feel like especially looking about how adults seem to not be in studies or tend to be less diagnosed when they grow into adulthood. It's like obviously it's, but it's my own view, but it's just the [inaudible] like this whole life with shame which is experienced.... and I just feel like it's it's kind of a lack.

There will always be people who slipped through the diagnosis net. So you, I hear you kind of acknowledging that there, but it will be interesting to know as numbers of diagnoses rise.

They they ... whether people as they go into adulthood, continue to participate in research so that we're getting all this, um, explanation. I'm aware that you've been very patient. Either that or you were hoping not to.... What's other theories? Have you got something different that you'd like to introduce or comments that you'd like to...?

Not really, not a new theory. Basically, the theory that we looked at was the extreme male brain theory.

Yes, right.

It was mentioned before.

Yes

So yeah, so it says basically everyone has like a female and male brain. It's like a theory came by Simon Baron Cohen. So it basically says that, oh, the female brain is more emphasizing more to its feelings, intuitions, perspectives and male brain is small systemizing. o more on mechanical things, mathematics, systems, patterns. So it says that...umm... The theory says that more males get a diagnosis because they get diagnosis... because of this extreme male brain theory where they come hyper-systemizers but also does raise like a lot of questions and a lot of criticisms with regards to this theory.

Well, looking into gerontology research and some of this research have shown that autistic people have a higher level of testosterone, [inaudible]. It says that excess testosterone can alter the structure of developing brains.

So as you go older, umm, it affects the the way they think and the way they do things.

So it might explain females with autism who are more systematizers, you know, they're they're more... yeah, so you're making that link, okay, good.

Yeah.

So I'll go back, where they've done research where...umm, on female and male brains and it showed that the female brain had more of the middle part of the brain, so they had more systematic compared to empathising. And nearly 80% of brains of women with autism has actually fallen onto the spectrum.

Yeah, interesting. Interesting bringing in that biological, neurological-biological explanation.

There are some more that biological factors and it's saying that that in-sex differences, there are differences in brain development. So for example, uhm, during childhood males will have like overall larger brain volume. And so for the people with autism spectrum disorder, ASD, this kind of character or like differences in the brain is more extreme than in normal people. And there is this test called reading the mind in the eyes test. So it said that people with ASD has shown like less activity and this test is for like, it's still measures the theory of mind. And so it's basically the ability to recognize the thoughts and feelings of others and people with ASD have shown that they didn't score much in the test, so they had low scores. Umm and Baro-Cohen... Yeah, the central trait theory also suggests that the parents of children with ASD has shown like hyper-masculinization of brain activity which suggests that this could be a part of the broader autism then.

Yeah, so it might explain why they can... children can put mechanistic pictures in a story and things like that. They're systemetizing and can do it. They can actually do those tasks very, very well, but it's the part that is what we call the mentalistic story coming called that, yeah, that actually kind of impedes their capability to make sense of the story.

So as an alternative hypothesis is extremely extra-male brain hypothesis is the gender invariance hypothesis, which it helped hypothesizes that ASD females are masculinizers, while controls are more feminine. So before adjusting the brain size and the results are more in line with the extra male

brain than the gender incoherence. However, the findings that they found was brain masculinization in the ASD group within both sexes after adjusting for brain size. They found that there's no difference between the and the groups and the controls, which does not provide evidence for either theory. So it is possible that adjusting the brain size removes a lot of variation of the interest.

That's a really, really good, sort of critical point.

Yeah.

Yeah, because we do tend to take umm, so some people do tend to look at the biological findings as kind of quite factual, which they are what they are you know, because they are why they're based on the actual brain. But yes, to actually make adjustments and consider different alternatives then that's really good point.

Marisa had her hand up.

Yeah, [inaudible], What I found. It's like typical children.

Typical children, research tends ... tends to be aware of like mental functions like dreaming, lying whereas autism tends to focus on more of the physical part of part of the brain? So when it comes to, I think it was [inaudible name] and Baron. Children tend to children with autism tend to struggle to know when someone else is lying. I think that's because they have to, kind of use that mental like acknowledgement that someone else is saying something that's not right to like the obviously they open or from evidence that I've seen, they only interpret what's being told them. They're kind of not looking at the wider picture. And I think that kind of links in... That's about the Theory of Mind, but it's kind of links in to Coherence Theory. It's very where they kind of look at more local so they look up whatever context we provided to them rather than taking information from other sources or other people, they focus on what they know.

I don't know if it really makes sense, kind of with the theories.

Yes.

Yeah, just about how there's like, different.

It's. It's different.

Yeah. Rather than bringing in other aspects of it, yeah.

Yeah, somebody was saying about the testosterone link

Yes, there was a study done to try and figure out if that was true and they gave that 600 and something men... yeah, they gave men testosterone didn't they to see if have an extra testosterone changed their capabilities of empathy, and said that it made make no difference. So it's just a little interesting...

Depends who they who they tested, I suppose.

They go, yeah.

As far as I know it was over 600 neuro-typical men.

Okay. Somebody else have anything in like to add?

I talked about the testosterone in do you mean like specifically in men that testosterone is higher or like in autistic people in general?

In autistic people

So males and females, they.

Yeah.

So the assumption was that women with uh autism would have higher levels of testosterone

That's right.

That to you, they have higher testosterone. So that's what they came up with?

Yes.

It's the male brain theory?

Yeah.

So I think like, I know you're still like it, it's not very... there's no actual backing to it.

No, because they didn't want to give women testosterone. That's unethical.

That's not in that one, but yeah, so I think that.

So by blaming testosterone, they kind of say and it's it's something that's usually related to males that are that is contributing to autism.

The worry would be that because it is a very widespread one, because it's it's so prevalent, the worry would be that people would use this as a justification to sort of the somewhat transphobic, to imply that just because a woman would have autism, they have a higher level of testosterone. And yeah, we demonize the community as a whole. So I think that ...

Yes, it could bring in gender sort of prejudices.

Yeah.

That's a really good point, bringing it bring it back to life experience and in the social world, and the lifespan growing through adulthood

Because it's a lot of theories mentioned that, sorry, research mentioned that there was a link that a lot of people within the queer community itself reportedly on the autistic spectrum.

So umm, so there is not a correlation that, you know being queer would result in you being autistic or the other way around. But when you hear things like this and when more research being done, but it's not being done in a systematic way or it's not being explained, people might actually give it to, oh, you're queer.

If you have any kind of gender prejudices to start with, you are likely when, if you hear about something, somebody who's autistic, testosterone, you're likely, perhaps, and this is me interpreting what you're saying, you're likely to perhaps then draw upon a sort of a social representation of somebody with high levels of testosterone as being, so it's not just not just the autism, but it's the whole gender identity thing as well.

Elliot.

Ohh so like neurochemical, the hormones and as you were saying, umm, transgenders

So some of them, they do take hormone blockers, so I was just wondering, could that possibly have [inaudible]...

That's not something that...it's a good question, but I'm not gonna do this here.

It's it's no, it's a.

It's a debate amongst ourselves... So any thoughts... but I think what what you both done Abi and Elliot have both done, and others along the way during this debate you've identified little areas of, maybe we could research this... somebody could do some kind of an initial study even on this, or maybe we can, you know, and I think some of the...umm, points that you've made that you've sort of implied that maybe we could find out more about have been about the autistic person's life experience...how do they how do they manage without a diagnosis?, you know. How are they dealing with, you know, hormonesdifferent the the different hormone levels if they've got levels, etcetera.

So some good points anybody would like to kind of finish up now or...? Okay, we can stop recording now.