

## **ECPS5004: Individual Differences Across Lifespan Essay**

Autism in the current world of society has made it an integral aspect of each individual's knowledge to certain degrees. As compared to previous decades, marking a significant era when the disorder was discarded as not important and often overlooked or misunderstood. Autism Spectrum Disorder (ASD), which is also familiarly known as autism, is a neurodevelopmental disorder. Furthermore, an individual is characterized by their lack of social communication cues. Individuals affected by autism spectrum disorder are often hyperfixated on certain things and are established to exhibit repetitive behaviours. (American Psychiatric Association, 2013). Thereby, it needs to be noted that the neurodevelopmental disorder that classifies autism as a part of the disorders is familiarly termed as a class of disorders that affects one's development of the brain and its function. It is the utmost distinguished by the incapability to attain cognitive, emotional, and motor development in the crucial markers of brain evaluation. (Parenti et al, 2020)

The aetiology of autism spectrum disorder (ASD) is versatile when it comes to finding the causes of an individual. The causes for the disorder often stem from a complex interplay of genetic and environmental factors autism as they affect the development of one's brain. To begin with the genetic factors, the disorder crucially contributes to the likelihood of intensifying the diagnosis from the patients. Moreover, environmental risks are carried from the genetic factors, as they amplify the perils that are inclined to individuals. The environmental factors play a role as they are depicted in ways such as infants who were born prematurely are proven to transport the greater susceptibility to autism spectrum disorder (ASD). Consequently, both environmental and genetic circumstances showcased their impact on the neurodevelopment of ASD.

Presenting the idea of autism goes back to the history of the disorder from the beginning of Leo Kanner's work on autistic disturbances, which started in the year of 1943. It began when Kanner showcased eleven cases of his child patients. The results followed where the children appeared isolated from society, refused to take part in social contact, and the majority of them had difficulties with their intellect. Additionally, the features listed he referred from the eleven cases to as 'autistic', making Kanner the first to label the term autistic to these features. (Kanner, 1943)

Besides Kanner, Hans Asperger's work has its correspondents with Kanner's research. Furthermore, he argued with the four boys with whom he observed the behaviours of difficulties in forming friendships. The behaviours displayed by the boys generally deprived empathy toward others as well as had trouble communicating with one another including clumsy movements. In other words, both Asperger and Kanner have similar research and work on it during the same timeline. However, both researchers work independently and have no evidence of working together. (O'Reilly, 2019)

One hypothesis that struck individuals is the historical narrative of autism referred to as 'refrigerator mother' referred to by Bruno Bettelheim. The refrigerator mother negatively, as well as inaccurately expresses that mothers of children with autism lack emotional abundance and parenting for their children. Likewise, refrigerator mothers are portrayed to be cold, and distant, along with being unloving. To emphasize once more, back when the autism spectrum disorder came to people's knowledge, it was highlighted that mothers were wrongly blamed for the behaviours of their autistic child. Therefore, the addition of their emotional distress and burden of guilt increases those who are already facing challenges with raising children with autism. Unfortunately, the hypothesis spread widely and was accepted by many psychologists and medical communities during the time of hypothesis was published. Thus,

the stigma of autism caused mothers to be dealt with differently, particularly unfairly due to the misconceptions surrounding autism spectrum disorder (ASD). (Schiller, 2023)

In this ensuing essay, autism spectrum disorder, or ASD, will distribute an explanation of the autism spectrum disorder (ASD) development across one's lifespan. The contents of this essay, specifically on theories about autism spectrum disorder, will be mainly centred around the class debate conducted. As well as evidence will be served to prove the correlation of autism spectrum disorder with one of the theories and the discussion that will be provided in the upcoming essay.

### **Psychological Theory Of Autism Spectrum Disorder (ASD)**

A few theories were discussed in the debate, such as the Empathizing-Systemizing theory, Theory of Mind, and Weak Central Coherence theory. Building upon the foundational understanding of the theories of ASD, the essay will first briefly explore and explain the empathizing-systemizing theory (E-S), which suggests that individuals are categorized based on variations of their tendency to empathize or sympathize. Additionally, the E-S theory proposes that males are likely to be diagnosed with autism spectrum disorder (ASD) than females, which was according to the debate. This is due to the fact that individuals with autism are particularly shifted towards a "masculinized" brain type since males are more systemizing than females who exhibit their empathetic drive. (Greenberg et al, 2018). Another theory that was mentioned in the debate was the Theory of Mind (ToM), which specifies the cognitive capacity that other individuals have in their own mental states and thoughts. Theory of mind reveals the importance and understanding of social communication development. However, those with autism (ASD) may not relate to other individuals who have the theory of mind because of the impairment in which they have difficulty interacting

socially with people. (Korkmaz, 2011). The significance of the theory of mind demonstrates some correlations to the Weak Empathizing-Systemizing (E-S) theory and Central Coherence theory.

In this essay, the theory that stands out will be elaborated on is the Weak Central Coherence theory. The insights of the information from the theory were conferred in the discussion of the debate. Starting with the overall overview of Central Coherence, which is the ability of an individual to integrate the general cohesive details from a vast amount of information. Individuals with strong central coherence can recognise the core details of the entirety of the information. However, a skill in which people with autism spectrum disorder (ASD) are often impaired is what is called “weak central coherence”. During the debate, it was mentioned how the theory of mind (ToM) is connected with the Weak Central Coherence theory. It can be evident that the Theory of Mind (ToM) always have relations with various theories. According to research conducted by Frith and Happé (1994), the theory of mind cannot always present itself in every aspect of ASD, meaning autistic individuals do not entirely exhibit the elements of the theory of mind. Moreover, it follows logically that Weak Central Coherence is usually linked to autism spectrum disorder, hence why people with autism tend to face difficulties in perceiving the information and interpreting it in a meaningful narrative. (Laushman, 2023). Furthermore, it is vital to consider how the weak central coherence theory intersects with other psychological frameworks, taken from the Theory of Mind. This theory sheds light on cognitive differences observed in autistic individuals with people without autism by looking in depth at the empirical research conducted.

It is essential to note that this theory has a correlation with autism spectrum disorder. Weak central coherence primarily focused on sections where individuals with ASD have difficulty achieving. This can include understanding other people’s perspectives, which is

essentially Theory of Mind (ToM), as well as executive functions. (Booth & Happé, 2010). Therefore, with the lack of certain characteristics that are seen in individuals with ASD have the tendency to focus excessively on details while at the same time struggling to integrate the information into a larger context nor are they able to grasp the overall meaning of the information. In other words, they exhibit a preference to grasp specific details rather than the overall meaning of the context. So, it makes it difficult for individuals with ASD to have effective social communication and interaction with others as their attentional bias might overshadow their ability to perceive certain details from the original meaning. (Booth & Happé, 2010). More pieces of evidence about the relationship between weak central coherence and theory of mind in individuals are observed in autistic adults, according to a research study conducted by Happe (1997). Furthermore in this matter, adults with autism have the tendency to encounter challenges with integrative language processing in regards to their theory of mind performance in the test. When viewing the theory from a biological point of view, in accordance with Thompson et al (2009), a lack of proper connection between both sensory and posterior processing areas of one's brain. As well as a lack of connectivity in the frontal lobes, which stimulates responses to sensory input. The outcome of this, due to the inadequate linkage, may cause the autistic individual to recall gradually, consequently, it causes them to focus on details that are trivial instead of focusing on the substantial piece of information.

Similarly, weak central coherence is divided into two sections, for instance, high and low WCC. Starting off with 'low' weak central coherence, it usually involves cognitive processes for example learning, attention, and perception. Also, it centred around the process of stimulus without having any context. On the other hand, autistic individuals with 'high-level' WCC disclosed that they are more "context-sensitive" when processing linguistic stimuli. (Bojda et al, 2021). This distinction between the two levels of weak central

coherence shows the complexity and its functions in determining the cognitive processes in people who are diagnosed with autism spectrum disorder (ASD).

To illustrate the practical implications of the Weak Central Coherence theory, a study conducted following the theory itself revealed that children with autism do well in arranging and matching patterned blocks. The reason for this is they do not necessarily need to require themselves to understand further the broader context of the pattern. According to Lamb et al (1990), children with weaknesses in central coherence exhibit a connection to the reading patterns of children with autism. In regards to whether they have good reading accuracy, they regularly have shown evidence of having poor text comprehension. It is left to wonder and ask why children with autism a beneficial memory for limited details of a story or information have, yet they are unable to recall the complete storyline. Moreover, this shows concrete evidence of the differences between autistic people and people who do not have autism in terms of central coherence. For instance, people without autism have the ability to remember the entire coherent narrative, and vice versa with autistic people. One study performed by Burnette et al (2005) displayed results that weak central coherence indirectly has an impact on crucial symptoms shown in autistic individuals, associated with social cognition and language.

Another study (Wałęcka et al, 2020) was also conducted in which the aim of the research is to grasp the understanding of whether autistic adults' are able to fully use their central coherence and differentiate between developed controls and high-functioning ASD. It was prominent that autistic adult individuals are slower when it comes to tasks that involve combining information into context. (Happé & Frith, 2006). The research states the consequence of weak central coherence is that visual illusions are decreased in susceptibility. (Walter et al, 2009). Moreover, this research study used two central coherence tests to investigate whether the quantity of information presented to the groups would have an

impact. The participants recruited are more likely to be autistic individuals with high-functioning autism, as it was mentioned that they are mostly likely to be at the highest risk of being misdiagnosed due to the complexity of the diagnosis. Prior to the main part of the research project, the research participants are required to fill in the Autism Quotient (AQ). This assessment is used to assess autistic traits in the adult population and this is used to check if there are any impairments in the ASD group. By doing this assessment is to do a comparison between each study group to control the outcome that may be impacted. As the participants began the main project, they were presented with two tests, where the first task cards were displayed, containing incomplete sentences. Participants are needed to match the sentence to make the story more coherent, with assistance. Similarly, the second test involved separate sentences which needed to be arranged to turn them into an organised short story. The overall result proved to be in line with the Weak Central Coherence theory as autistic individuals are impaired in their central coherence. According to Lopez & Leekan (2003), central coherence requires putting information into the context when one reads or interacts with their environment. This sheds light on why social skills development is impacted by the processing speed of language material. Therefore, this study provides substantial support for the theory.

Just like any other theory, Weak Central Coherence theory has its support, limitations, and criticisms. There are pieces of evidence where weak central coherence theory has been one of the major ASD theories. However, there are criticisms and limitations to the theory. According to Scher and Shyman (2019), there are challenges to the theory due which the limited consideration of neuroscientific evidence, meaning the development of the theory was during the time when neuroscience knowledge about autism spectrum disorder was lacking. Thus, it raises questions as to its completeness and how applicable this theory can fit in recent neuroscientific findings. Scher and Shyman (2019) also stated another potential disadvantage

implies that autistic individuals with weak central coherence have local processing bias rather than it to have a deficit in global processing.

To conclude, this essay provides a comprehensive overview of autism. From multiple theories, aetiology, and historical backgrounds associated with the disorder. Moreover, the essay's investigation of autism spectrum disorder (ASD) and its association with psychological theories reveals both challenges and progress and shows the complexity of the interpretation. Throughout this paper, all three theories declared in the debate offered exclusive insights into the social as well as cognitive processes implicit in ASD. Particularly, this paper mainly centres around the WCC theory, which suggests autistic individuals have a processing bias towards integrating tiny parts of the context, rather than the entirety. Although the comprehension of autistic individuals' experiences and behaviour was provided by the significant frameworks from these theories, society's knowledge of the disorders remains incomplete. This is to say that there is not enough research in regard to autism spectrum disorder and autistic people. Therefore, it creates a sort of drawback to developing a deeper insight into the disorder. The weak central coherence (WCC) theory has given its support in the ASD literature, but it still refutes certain areas of the theory. Despite the theory's contribution to the ASD literature, it is evident that there is a lot to learn and investigate further in the realm of autism research. Therefore, the theories discussed in the debate gave an insight into how understudied the nature of ASD and the complications inherent in the disorder's diagnosis and treatment. from my personal point of view. However, research on autism spectrum disorder (ASD) is still evolving and will provide the research community with knowledge.

## References

- American Psychiatric Association, A. P., & American Psychiatric Association.  
(1994). *Diagnostic and statistical manual of mental disorders: DSM-IV* (Vol. 4).  
Washington, DC: American psychiatric association.
- Bojda, A., Srebnicki, T., Konowalek, Ł., & Bryńska, A. (2020). Weak central coherence -  
construct conception and development, research methods. *Psychiatria Polska*, 55(6),  
1–13. <https://doi.org/10.12740/pp/onlinefirst/120931>
- Frith, U., & Happé, F. (1994). Autism: beyond “theory of mind.” *Cognition*, 50(1-3), 115–  
132. [https://doi.org/10.1016/0010-0277\(94\)90024-8](https://doi.org/10.1016/0010-0277(94)90024-8)
- Greenberg, D. M., Warrier, V., Allison, C., & Baron-Cohen, S. (2018). Testing the  
Empathizing–Systemizing theory of sex differences and the Extreme Male Brain  
theory of autism in half a million people. *Proceedings of the National Academy of  
Sciences*, 115(48), 12152–12157. <https://doi.org/10.1073/pnas.1811032115>
- Happe, F., & Frith, U. (2006). The weak coherence account: Detailfocused cognitive style in  
autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 36(1), 5–  
25. <https://doi.org/10.1007/s10803-005-0039-0>
- Happe, F. (1997). Central coherence and theory of mind in autism: Reading homographs in  
context. *British Journal of Developmental Psychology*, 15, 1–12.

Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child*, 2, 217–250.

Retrieved from [http://www.neurodiversity.com/library\\_kanner\\_1943.pdf](http://www.neurodiversity.com/library_kanner_1943.pdf)

Korkmaz, B. (2011). Theory of Mind and Neurodevelopmental Disorders of Childhood.

*Pediatric Research*, 69(5 Part 2), 101-108.

<https://doi.org/10.1203/pdr.0b013e318212c177>

Laushman, P. (2023, January 25). *What is Central Coherence and What Does it Have to Do With Autism?* ThriveAutismCoaching.

<https://www.thriveautismcoaching.com/post/what-is-central-coherence-and-what-does-it-have-to-do-with-autism#:~:text=Weak%20central%20coherence%20is%20a>

Lopez, B., & Leekam, S. R. (2003). Do children with autism fail to process information in context? *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 44(2), 285–300. <https://doi.org/10.1111/1469-7610.00121>

Loredana, A., & Ghazi. (2018). History of autism. The beginnings. Collusions or serendipity. *Journal of Educational Sciences*, 2(38).

<https://files.eric.ed.gov/fulltext/EJ1244751.pdf>

O'Reilly, M., Lester, J. N., & Kiyimba, N. (2019). Autism in the Twentieth Century: An Evolution of a Controversial Condition. *Healthy Minds in the Twentieth Century*, 137–165. [https://doi.org/10.1007/978-3-030-27275-3\\_7](https://doi.org/10.1007/978-3-030-27275-3_7)

- Parenti, I., Rabaneda, L. G., Schoen, H., & Novarino, G. (2020). Neurodevelopmental Disorders: From Genetics to Functional Pathways. *Trends in Neurosciences*, 43(8), 608–621. <https://doi.org/10.1016/j.tins.2020.05.004>
- Thompson, L., Thompson, M., & Reid, A. (2009). Functional Neuroanatomy and the Rationale for Using EEG Biofeedback for Clients with Asperger’s Syndrome. *Applied Psychophysiology and Biofeedback*, 35(1), 39–61. <https://doi.org/10.1007/s10484-009-9095-0>
- Wałęcka, M., Wojciechowska, K., & Wichniak, A. (2020). Central coherence in adults with a high-functioning autism spectrum disorder. In a search for a non-self-reporting screening tool. *Applied Neuropsychology: Adult*, 1–7. <https://doi.org/10.1080/23279095.2020.1804908>
- Walter, E., Dassonville, P., & Bochsler, T. M. (2009). A Specific Autistic Trait that Modulates Visuospatial Illusion Susceptibility. *Journal of Autism and Developmental Disorders*, 39(2), 339–349. <https://doi.org/10.1007/s10803-008-0630-2>
- Why “Refrigerator Mothers” Are Blamed For Autism? (n.d.). <https://www.thetreetop.com/aba-therapy/why-refrigerator-mothers-are-blamed-for-autism>