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"Officially Described as Mysterious": New Directions in Demystifying Autism

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*“OFFICIALLY DESCRIBED AS
MYSTERIOUS”: NEW
DIRECTIONS IN
DEMYSTIFYING AUTISM*

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Sheffield Hallam University

A thesis submitted in partial fulfilment of the requirements of
Sheffield Hallam University
for the degree of Doctor of Philosophy,

November 2024

Candidate Declaration

1. I have not been enrolled for another award of the University, or other academic or professional organisation, whilst undertaking my research degree.
2. None of the material contained in the thesis has been used in any other submission for an academic award.
3. I certify that this thesis is my own work. The use of all published or other sources of material consulted have been properly and fully acknowledged.
4. The work undertaken towards the thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy, and ethics approval has been granted for all research studies in the thesis.
5. The word count of the thesis is 82,652.

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Abstract

Thomas' thesis explores the seminal research papers relating to autism across multiple disciplines in the past 100 years, focusing on 'communication'. He adopts principles from the integrationist approach to foreground and challenge ingrained notions of communication 'deficits' within the autistic population and examines how misconceptions around what constitutes 'good' or 'normal' communication have been central to both stigmatising the community and approaches to 'treatment'. The thesis highlights as a central theme that whilst definitions of autism have consistently focussed on perceived differences or deficits in communication style, there is a stark absence of consideration of what actually constitutes communication.

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“Officially Described as Mysterious”: New Directions in

Demystifying Autism

An integrationist perspective on past autism papers and the future of autism research.

Chapter 1: Introduction

1.1 The Need for a Change in Course of Autism Research

In her enlightening video, “In My Language”, autistic blogger Amanda Baggs says that “people like me are officially described as mysterious and puzzling” (Baggs, 2007). Baggs’ point is inescapably acute. Despite over 80 years of autism research, very little is indisputably known or understood about autism. There is very little consensus, and much misconception, about what autism is.

Yet autism is prevalent in society with approximately 1% of the general population are identified as having an autistic spectrum condition, 2% of males and 0.3% of females (NHS, 2012). That equates to approximately 700,000 UK citizens being autistic.

The experiences of this 1% of the populations supports the claims that autism is widely misunderstood. Studies show that autistic people encounter the following repercussions of society’s misunderstandings:

- 34% of autistic children say the worst thing about school is being picked on (Reid 2011 p.7)

- 63% of autistic children are not receiving the education that their parents think would best support them (Reid 2011 p.18)
- 17% of autistic children have been suspended from school, of this group 48% had been suspended three or more times and 4% had been expelled from one or more schools (Reid 2011 p.8)
- 70% of autistic adults do not believe they are getting the help they require (Bancroft et al 2012)
- One in three autistic adults experience mental health difficulties and have a mental health diagnosis (Rydzewska 2018)
- 16% of autistic adults in the UK are in full time employment, and only 32% are in any paid work (National Autistic Society)
- 10% of autistic adults receive employment support, but 53% say they want it (Bancroft et al 2012)

The need for a better understanding of autism has already been recognised by the academic community. Academic autism research saw an increase of 107% between 2001 and 2011 (Pellicano and Charman 2014 p.22). Yet despite such a significant increase, there is still little cohesive understanding of autism as an entity.

Luke Beardon's book "Autism & Asperger Syndrome in Adults" (2017), which advertises itself as an "up-to-date overview" of autism research, starts with the provocative statement: "[n]ever believe *anything* you read about autism" (2017 p.1, emphasis original). Beardon attributes the lack of consensus to the heterogeneity of autism itself. Autism is so diverse that while theories may hold truth for one autistic person, they probably will not hold true for another. In Beardon's own words "there is extraordinarily little that can be said to be 'true' or 'valid' when pertaining to the whole of the population described as autistic" (ibid).

Beardon certainly does not stand alone in this observation. A popular phrase in some autistic communities, used in Milton and Martin (2017 p.112) in their work is, “if you have met one autistic person, you have met one autistic person”.

Another reason for the lack of cohesion is the diversity of research disciplines. Just like any study of human behaviour, the diversity of what is being researched results in autism research spanning numerous disciplines, philosophies, methodologies and even political motives.

Added to this is the growing body of work from autistic people themselves. Amanda Baggs has already been cited. Temple Grandin has multiple published works (notably see 1996, 2013, 2022) and a film providing her own insights on her autism. *The Reason I Jump* by Naoki Higashida is also an influential book answering major questions on autism from the autistic perspective, this too has been adapted to film.

Such diversity in approach inevitably has resulted in diversity of conclusions. The multiplicity of thought contributes to clouding any coherence in the field, as different methodologies or epistemologies draw different conclusions. The lack of agreement on any element of autism filters down to public consciousness. Consequently, autistic people end up as “officially described as mysterious” (Baggs, 2007).

1.2 Aims, Research Questions, and Objectives

Defining autism is not a simple task. Research around autism is ever evolving, and the characteristics associated with autism are ever changing. Without a widely recognised core identifying feature of autism the term “autism” is somewhat fluid. Consequently, many researchers search to answer the simple question of “what is autism?”.

The present thesis does not seek to answer this question. Autism is not the focus of this paper. Instead, the focus of the paper is the answers that have been provided to the question “what is autism”. There will be no attempts to unearth any “truth” about autism, no claim about autistic nature, nor any observation about autistic behaviour. In short, the object of review is autism research, not autism itself.

The discussion of “autism research” will merely be an extension discourses happening within the field of linguistics. In linguistics such discussions are referred to as “linguistic reflexivity” or “metalinguistics”. In his discussion of linguistic reflexivity Talbot J. Taylor quotes Rorty saying:

“changing the way we *talk about* our ‘talk’ [is] changing what we want to do and what we think we are” (Rorty 1989 p.20 in Taylor 1997 p.184).

Changing the way that researcher’s represent communication in autism research is central to driving for change in what is believed about autism itself. Through a discussion of underlying communicative beliefs, a change can occur in what conclusions are drawn through autism research, and in how autism research is conducted.

The critical analysis of autism literature will be done through a lens of linguistic philosophy. Linguistic philosophy is scarce within the body of autism research, and it is an avenue of thought that would richly benefit the field. Regardless of which of the many descriptions of autism is adopted in research, the overwhelming majority will allude to “communication” or “social interaction” in some form. Consequently, the Diagnostic and Statistical Manual, Fifth Edition (DSM-5), which lays out the current criteria for autism diagnosis, defines autism in the following way:

“To meet diagnostic criteria for A.S.D. according to DSM-5, a child must have persistent deficits in each of three areas of *social communication and interaction* ... plus at least two of four types of restricted, repetitive behaviours” (emphasis added)

Communication and social interaction are at the very heart of society’s understanding of autism. From diagnosis, to therapy, to research there is an explicit link between the two phenomena. Yet those asking the question of “what is autism”, very rarely ask the question of “what is communication”. The following thesis will be providing a root and branch exposition of the communicative foundations upon which theories of autism are built. Where autism is defined in relation to aspects of communication, the thesis will be exploring the consequences of the underlying assumptions that are made about communication, and the consequences on the resulting understanding of autism.

The lens of communication philosophy used will draw on elements of Integrational Linguistics, an epistemology founded by Roy Harris. Integrational Linguistics challenges the popular prescriptive models of linguistics that are widely adopted throughout the discipline.

During the critical analysis of literature, explicit reference to the Harrisian framework shall be scarce. The approach preferred in this section is merely to highlight the underlying conceptualisation of communication and their consequences.

The overt referencing of integrationist texts shall come in a later chapter, when a model of autism research is offered which combines the integrationist perspective with the emerging trend of participatory and emancipatory autism research.

The justification for leaving out an overtly integrationist perspective until the final chapter is that the critiques levelled at past autism research do not have to be

integrationist in nature. The lack of understanding of communication in autism research is clear. It should not be only acceptable to those who subscribe to the integrationist epistemology. One can reject the integrationist epistemology but still recognise the need to address the issues in the review of past literature. Therefore, the aim of these chapters is to demonstrate a *need* for linguistic input, it is important that this is not discounted due to linguistic disagreements.

The integrationist perspective is included in the final chapter as this thesis' solution to the perceived problems. It is the belief of this thesis that the integrationist perspective is the solution best placed to meet this need and is well placed to be central to the future of autism research.

It is important to the core values of this thesis to recognise that other epistemologies, other disciplines, and most importantly members of other communities (such as the autistic community) may offer different solutions. While these parties may challenge this integrationist solution, the baby should not be thrown out with the bath water.

The original identification of the need for a solution must be recognised.

Thus, it is the aim that the critique can stand independently from the integrationist future offered. What is offered is *a* new way forward which addresses concerns about past research. It is not a dogmatic belief that it is *the* only way forward.

In summary, this thesis has two primary objectives. The first objective is to explore the underlying philosophies of communication in seminal autism theories and discuss the impacts of these philosophies on the resultant characterisations of autism.

The second objective is to propose a bridge between the integrationist perspective and modern autism-led practices in autism research. In doing so not only will

critiques of past autism research be supported, but also a new direction will be highlighted to benefit future works. By challenging past assumptions and contributing towards new directions in autism research. These actions are aiming to contribute to the movement to “de-mystify” autism.

The specific focus of this literature review is to provide a root and branch analysis of the underlying philosophies of communication behind each theory of autism. In doing so, this thesis aims to bring the connection between linguistic philosophy and theory of autism to the fore. Demonstrating a link between the philosophy of communication at the onset of research, and the resultant theory of autism at the end of research, will contribute to towards the ongoing discourses about beliefs and misconceptions of autism in wider research in an original manner.

Consequently, the product of this thesis will not answer any questions about autism directly. There will be no over-arching conclusion or contribution towards a theory of autism. Instead, this paper proposes a new lens through which to look at autism research. Autism research is the focus of all discussion within this paper, not autism itself.

Finally, this paper will propose some compatible areas that could form the foundation for adopting a linguistic philosophy into modern movements within the field of autism. The epistemology of integrational linguistics will be proposed as an effective lens through which to view autism. There are already calls for such an approach and Charlotte Klemmensen (previously Charlotte Nielsen) writes that:

“an integrationist framework for analysis is needed that lifts Autism out of psychiatry and into the field of language psychology” (2011, p.595).

Finally, the commonalities between integrational linguistics and movements such as participatory and emancipatory research methodologies will be explored, and the prospect of a marriage between these approaches will be broached.

The purpose of the thesis is to ask questions of existing schools of thought, and finish by proposing a pathway to further knowledge. Thus, the research questions below are open ended. And can be summed up as follows:

1. To what extent is there a working understanding of “communication” in autism research?
2. When existing beliefs about communication in autism research are challenged, how does this effect the resultant conclusions about autism?
3. How can an integrationist philosophy of communication be balanced with an autism led participatory approach to create a new future for autism research?

It is in the answering of these three questions that this thesis will make its contribution to the field of autism research. The first original contribution to knowledge will be to provide a comprehensive root and branch analysis of the beliefs about communication in autism research.

Second, a critique of existing theories of autism will be constructed. The critique will highlight the impact of communicative beliefs on the understanding of autism. In doing so, questions will be asked of some of the leading contributions to society’s understanding of autism.

Finally, the thesis will contribute a new set of principles for future autism research methodologies; principles which ensure a balance between autistic participation, and a bedrock of linguistic theory. The outcome of these principles will be to provide a framework in which future autism research does not fall into the same patterns as

the research that has come before it. Thus, society's understanding of autism can be more participatory, and better informed about communication.

1.3 Epistemology

Autism scholar, Nick Chown wrote:

“if the theory applied to autism is poor theory, we will misunderstand autism. If we base our practice on poor theory, our interventions in support of autistic people are likely to be unsuccessful, but may also cause harm to those we are trying to support.

And if we base our interventions on no theory at all, or on an assumption that a particular theory applies, an element of lottery enters into the equation” (Chown 2017, p.7).

Much of the present thesis will be dedicated to the “assumption that a particular theory applies” element of this quote in previously existing papers. To do so, the present thesis must be aware of its own theoretical foundations.

Although it won't be overtly applied until the final chapter, this thesis is at its core an integrationist thesis. The ideals of the linguist Roy Harris, ideals that form Integrational Linguistics, will be adopted to achieve this thesis' objectives.

A full description of Integrational Linguistics will be provided in the final chapter. Here it is enough to know the Integrational Linguistics is a radical school of linguistics that challenges the traditional Saussurean school of linguistics. In doing so, Integrational Linguistics has built a metalinguistic framework for discussing linguistic research. Therefore, Integrational Linguistics is well placed for a critical analysis of research that focuses largely on communication such as autism research. Furthermore, Integrational Linguistics lays out a set of linguistic beliefs that forms the basis of theory that Chown highlighted as being so important in autism research.

Principles of Participatory Research will also be introduced, and common ground found between the two bodies of research. The introduction of Participatory Research does not necessarily introduce any new theory of communication or autism, but instead introduces methodological principles for advancing autism research.

Crucially, this thesis will not provide a traditional “methodology”. The reason for the lack of an established methodology is two-fold. The first and primary reason for omitting a methodology is due to the role that the integrationist perspective plays in this thesis. Much of this paper does not rely on adopting an integrationist perspective, many of the critiques of previous research papers transcend linguistic allegiance. Yet the final two chapters, proposing a new direction in autism research, will propose the adoption of integrationist principles in autism research. Integrational Linguistics does not have a methodology, and thus adopting a methodology for autism research that is built on integrational linguistics would be building a house on sand.

Integrationists reject the notion of methodology as “[e]pisodes of communication are episodes in the lives of particular people at particular times and places. Signs are products of such episodes.” (Harris, 2009, p.70). Thus, any communication is a creative and time-bound act, and thus entirely unique. Or in the words of Jones and Read (2003):

“‘Managing to communicate’, on this view, is a matter of our active exercise of creative and open-ended communicational powers or proficiencies which we develop throughout our lives and which enable the contextual integration of activities, powers

which are not accountable or storable in terms of 'units' of any kind or as idiosyncratic à la carte repertoires of units taken from an available pool."

Methodologies are based on the understanding that a communicative act can divulge something about another communicative act. Thus, methodologies are geared towards understanding something about the "subject" itself, in this case understanding something about "autism".

As previously stated, the present thesis is not aiming to accomplish this goal. The thesis is looking at the discourses, both research and lay discourses, that surround autism. The integrationist perspective is well-placed to focus on the theories and mythologies that surround autism. Jones and Read (ibid) write:

"On that basis integrationism takes the ... constructs and theoretical assumptions of different schools of linguistics themselves as its primary subject matter for analysis and exegesis. In exposing the ethnocentric biases and limitations of such positions, integrationism thereby encourages critical enquiry into all of human communicational experience, whose horizons are unfixable, and embraces everything which may be involved in and relevant to the exercise and development of such powers, including our beliefs about such experiences and the role such communicational beliefs play in direct communicational encounters as well as in broader cultural and political fields."

Such a philosophy is radical, yet radical change is required to update the current understanding of autism. Integrational Linguistics will be expanded upon more as the thesis progresses, most notably in Chapter 6, yet it is introduced in brief here to

address the question of methodology. The thesis neither needs a methodology, as it does not address the first-order construct of autism / autistic communication itself, and nor would the thesis' core beliefs be compatible with an over-arching methodology.

Secondly, this thesis does not require a methodology. A methodology is mostly used to describe how a body of work will pursue answers. The thesis is not pursuing answers, or at least not pursuing answers about any primary entity, such as autism itself. Instead, the thesis is asking questions of autism research, a secondary meta entity. The thesis therefore is a critical analysis of existing research, followed by a theoretical discussion of epistemology, resulting in general principles to be adopted to form methodologies in the future. There is no first-order data set, that is a data set occurring from autistic participants. Thus, there is no way to collect said data. Nor is there a framework with which to interpret any first-order data.

The present thesis rejects the route of taking a traditional methodology. The rejection is not say that there is no structure to the inquiry adopted here. Instead it is distinguishing between what the thesis will call method, and a traditional methodology.

Here, "method", such as the identification of papers for discussion, does not involve the abstraction of information from context. Nor does it require any "study" of a first-order concept, such as autism or language. In contrast, a traditional methodology abstracts first-order phenomena, such as language, and re-contextualise this as "data". The data is then analysed and manipulated in order to reveal some truth

about a first-order concept. A methodology is designed and implemented in an attempt to identify a truth.

This distinction is important to this thesis. The thesis consistently reiterates that it is not a study of “autism”, it is a systematic critique of the research pertaining to autism. Thus there is no “real world” or first-order, object of inquiry.

There is no grand overarching hypothesis about autism which requires data to prove or disprove. Part of the motivation for distancing discussion from first-order phenomena was to avoid the inevitability that often accompanies the triad of hypothesis, methodology, and result. The inevitability here is that the research often cannot fail to prove itself correct. There is an observer bias in the process. In the words of Pablé and Hutton:

"[w]e see what we expect to see, or what we hope to see, and we have a strong desire to find our hypotheses confirmed" (2015, p.39).

Consequently, there is a history of traditional methodologies marginalising some voices. The voices may contradict the pervasive theories, they may be outliers or anomalies from the patterns identified in a wider data set, or they may just be voices that are not deemed to be qualified to be considered. As a thesis that foregrounds the autistic experience, it was paramount that this was not allowed to happen. On a similar note, but regarding language research, Jones writes:

“The integrationist perspective...emphasizes that no humanly experienced factors, whether in practices or beliefs or in the circumstances of life activity, can be ignored in advance or excluded (on theoretical or methodological grounds) from consideration of what language might be taken to be, if at all.” (Jones 2022, p.7181).

The use of a traditional methodology results in elements being ignored or excluded.

The exclusion can occur via the manner in which data is collected, the manner in which it is recorded / re-contextualised, or the manner in which it is interpreted.

The method of selecting texts in this thesis can be accused of falling into the same trap, and indeed recognition needs to be given to the fact that the papers chosen do not encompass all of autism research. Naturally that would be impossible. But the difference lies in what is being excluded. Every literature review must make decisions on what literature is relevant and to be included. Every academic work which cites peers makes the same decisions. The academic can only address a certain volume of thought in their work.

The difference between this decision, and the decisions that lead to exclusion of first-order elements is crucial. The exclusion of an academic paper does *not* impact the researcher's ability to engage with the papers that are included. A research paper includes all the aspects that were deemed salient by the author. One can engage with the paper, and the references/data and so on, within that paper, and pass comment on it knowing that it is the entirety of what was deemed useful to make that point.

In contrast, methodological decisions when collecting data from first-order aspects of communication or autism, narrows the information to the point of irrelevance. The autistic experience of one individual, never mind the entire autistic population, is so vast that no amount of data collecting can even begin to provide an insight into it all. Any methodological choice just narrows the researcher's data to the point of irrelevance. It is just like looking at a mountain through a keyhole. Nobody can draw over-arching conclusions about autism and autistic communication, when they can

see but a small number of instances in an infinite unrecorded history of autistic behaviour.

Method is inevitable in all life's endeavours, there is a method to making a cup of tea. To the present thesis, the use of methodology is not inevitable. Methodology is specifically designed for the study of something, and the end goal of study is to identify some "truth". There is no quest for truth in this thesis. The method to identify salient papers in the field is simple, and justification is provided. But to call it a methodology is to suggest that there has been an attempt to draw conclusions about autism itself, which is not the case.

Instead, the object of focus is existing literature. Such a focus can be considered second order, or meta. The data set, if existing literature can be referred to as such, is the discourse that is happening around autism. While the thesis does not adapt a methodology to collect the objects of this discourse, that is not to say that there is no "method". The thesis has selected seminal papers and analysed them using existing linguistic theory. It is the belief of this thesis that this cannot be framed as traditional methodology, but instead as analysis of existing research and literature. To draw on the Rorty (1989) quote above, the thesis is changing the talk about how autistic people talk. It is not collecting data and analysing autistic talk itself.

1.4 Autism: A Rough Guide

1.4.1 Factions of Autism Research

Autism research is factious, with different schools of thought presenting different conceptualisations of autism, and different ways of approaching autism research.

Accessing any discussion of autism research, first requires an underlying knowledge of the different approaches to the area.

These divisions mostly supersede the usual research divides of disciplines and epistemology. Although, of course, some disciplinary approaches naturally lend themselves to certain approaches. Instead, these divisions permeate throughout all autism research, and whether consciously or not, each researcher must adopt one perspective or another at the onset of research.

Medical Model vs Social Model

The first of these divides is between the medical model of autism, and the social model of autism. The medical model seeks to identify or describe one, or several, core impairments in autistic people that sets them apart from non-autistic people. Thus, the model is deficit based. The medical model does not seek explanations that incorporate other factors external to the individual such as society, the environment, or learned experiences. The medical model works from the basis that the autistic individual is “impaired”, and focuses on identifying the nature of impairment, treating and normalising the individual, reducing symptoms of autism, and even curing autism altogether. Luke Beardon describes the medical model as being built upon the perspective “that being autistic means that there is something ‘wrong’ with you, and that there are ‘impairments’ that need ‘fixing’” (Beardon 2017 p.17).

The alternative to the medical model is the social model, which is the inverse of the individual deficit-based approach described above. The social model seeks other factors such as the environment and society to explain disability. The social model conceptualises autistic people as being disabled and disadvantaged by a society that is not adapted for them. In the words of Luke Beardon, the social model:

“implies that any problem that a ‘disabled’ person might have is rooted in the environment – i.e. with society – and that changes and adaptations within society will reduce or eliminate the negative issues face” (ibid).

1.4.2 Terminology

Terminology is another divider in the autism world. People adapt different terminologies to suit their own linguistic, personal and philosophical perspectives. There is no agreed right or wrong when it comes to terminology use, despite strong opinions on both sides. The below briefly outlines the language that will be used throughout this thesis and provides justification for those choices.

Autism Nomenclature:

There are numerous ways of referring to autism as a diagnosis. There are the terms: “Asperger’s syndrome”, “Kanner’s autism”, “autism spectrum disorder (A.S.D.)”, “autism spectrum condition (A.S.C.)”, or just “autism”. The terminology used throughout this thesis shall be “autism”. The justification for the decision is that the philosophical position of this thesis questions the concepts of “disorder” and of autism as a “condition”. A case will also be made within this thesis to question the conceptualisation of autism as being on a spectrum. Thus, these terms would be inappropriate to continue using within this thesis.

Regarding the division between “Asperger’s syndrome” and “Kanner’s autism”, this is seen mainly as a political and theoretical divide, that will be the focus of much discussion later in the thesis. Furthermore, the identifier of “high functioning”, and the identifiers associated with it, will also not be used. The thesis views this concept as ambiguous and often unhelpful. Again, this will be discussed throughout.

The choice of terminology is not to take away from others who identify using any of the above terms or others. The identity associated with groups who adopt other terms is not to be denied.

Person-First vs Identity-First Language:

Person-first language places the person at the front of the descriptor, i.e. “person with autism”. Identity-first language places the identity at the front i.e. “autistic person”.

The argument in favour of person-first language is that it does not allow autism to define the individual. Autism is something that the person has, but it is not who they are.

The counter argument, from those that use identity-first language, is that person-first language portrays autism as an “add on” to the person. Whereas identity-first terminology recognises autism as an intrinsic aspect of the person. In this case, if autism was removed, what remains would not be the same individual. The argument against identity-first is that it allows a person’s diagnosis to define them.

The terminology used in this thesis shall be identity-first. The present paper recognises the inseparability of autism from the individual. Autism is something that somebody is, there is not an underlying person that can be separated from the autistic experience.

Consistency in Language Style

The present thesis is inter-disciplinary in nature. Consequently, it exists in a space between multiple disciplines and the lexicon and styles of those disciplines. The differences in language between disciplines can be confusing, thus the thesis aims to unify terms underneath one banner term when not using quotations. Within

quotation, the original writers' terms shall be honoured, but where needed, other terms might be adopted in the discussion. Where these choices occur, the thesis shall make it clear which term is referring to which concepts.

Where papers are jargonistic, the jargon shall be introduced, explained, and then discarded in favour of a lay term where possible. It is the aim of this thesis to be accessible to as wide a range of people as possible, and the removal of disciplinary or academic jargon is an essential step in this process. Language should not be used to create an inaccessible meta community who alone have access to the subject matter. The present thesis aims to be accessible to people from the communities that it is discussing.

Furthermore, this thesis explores the origins of many schools of thought within those disciplines. With Leo Kanner beginning his study of autistic children in 1938 and Ferdinand de Saussure writing "Course de Linguistique General" in 1916, that also means that language and stylistics from other generations of research are prevalent throughout this thesis. With such a broad array of subject matter, there is the potential for language choices and styles to become jarring within this thesis. While this cannot be avoided in its entirety, to consolidate language choices, there will be consistency outside of quotations. Some examples of this can be seen above, such as "autism", "autistic spectrum disorder", "autistic spectrum condition", "Asperger's syndrome", "autistic psychopathy" and so forth. While the original authors' terminology will be maintained, outside of quotation the term "autism" will be used.

There are other examples that merely reflect a modern researcher's preferred terminology. For example, in some of the older literature, researchers' use the term "subject" to describe those within their study. Outside of quotation, these people will

be referred to as “participants” instead reflecting a more participatory view of their role in the study.

The thesis recognises the power of language, and all language choices have been made with the thesis’ core principles in mind. Where language that is not representative of these principles has been used, this is to ensure cohesion between the papers that the thesis is drawing upon and the discussion of said papers.

What is Meant by Communication

The term “communication” has already been used frequently in this introduction. Communication will be at the heart of this thesis, and as a term it occupies an unusual position within the discussions that follow. As this thesis is inter-disciplinary, it is necessary to provide a quick sketch of what is meant by the term “communication”.

The literature that is being reviewed uses “communication” and similar terms such as “interaction” and “social” interchangeably, largely to indicate an autistic deficiency in the skill. The present thesis will challenge this, not least due to a lack of clarity on what constitutes “communication” or what actions fall under the umbrella of the term.

One way “communication” is unusual is that it occupies a space between being a layman term and a jargonistic term. The calls in this thesis for researchers to define communication could well be met with the counter that “communication” belongs in the day-to-day vernacular, and that social beings recognise communication when they see it. While this thesis champions such a lay perspective it would counter the point by stating that the scientific nature of enquiry being conducted on autism necessitates the need for rigidity in definition of communication. There is a circularity, from which the resultant theories of autism necessitate a theory of communication to

begin with. Thus, the research moves away from any lay understanding of “communication” by contextualising it as something jargonistic. There is an inescapable necessity for the researcher who defined autism in relation to communication, to define the parameters of what communication is. Without doing so, there is no clarity on the object of inquiry, and defining autism in relation to communication is a house built upon sand.

In contrast, this thesis is built upon a well-defined understanding of communication. An understanding of communication that is drawn from integrational linguistics. Such understanding can be described fluidly and simply as: anything that the individual finds to be communicative. Roy Harris described communication:

‘as including all processes in which human activities are contextually integrated by means of signs’ ([1996](#) p.11)

The understanding of communication provided here is a condensing of the integrationist perspective which can be found in more detail in the Chapter 6. The detail provided is to provide the context for the varied and fluid treatment of communication throughout this thesis.

Adopting such an open-ended definition a model of communication is of benefit to the study of autism, as it does not contradict the autistic experience. Amanda Baggs, while just one autistic person and not able to speak for the entire autistic community, provides an enlightening insight into her own communicative experience:

“my language is not about designing words or even visual symbols for people to interpret. It is about being in a constant conversation with every aspect of my environment” (Baggs, 2007, transcribed for this thesis).

What counts as communication is a philosophical question. It spans disciplines, lay and research perspectives, and a multitude of different thoughts and theories. But in short, this thesis will define communication as anything that is salient and meaningful to the individuals.

All things under this umbrella term of “communication” will be treated with absolute equality. Language can be communicative, as can gesture and gaze. and paralinguistic features such as intonation and volume. But these are no more, or no less, important than any other element of the environment that an individual can create meaning from. It is the belief of this thesis that only in this way can a paper truly be said to be open to the autistic communicative experience.

1.4.3 Seminal Papers in Autism Research

The following chapters will provide a root and branch exposition of the underlying philosophies of communication in autism research. They will construct a detailed review of key bodies of research over the decades since autism was first described. Such a task requires the ability to track ideas and concepts over decades. To aid in this task, below is a brief introduction of key milestones in autism research.

Leo Kanner

The first academic paper published on autism was by Leo Kanner in 1943, titled “Autistic disturbances of affective contact”. Kanner’s paper followed observations made of a group of children who exhibited previously unobserved patterns of behaviour. Parents of these children had described a trend of isolation, with descriptions stating the children were “like in a shell”, “happiest when left alone” and exhibiting “failure to develop the usual amount of social awareness” (ibid).

Kanner began a study of these children in 1938 and concluded that their behaviours were unlike the behaviours of usual schizophrenia. Kanner describes the central characteristic of these children as an “*inability to relate themselves* in the ordinary way to people and situations” (p.242, emphasis original). Kanner labelled this new syndrome “autism” a term which had previously been used to describe a sub-set of schizophrenic behaviour by Bleuler in 1911.

Kanner’s paper was the first published work to recognise autism. The paper introduced many of the core principles that are now associated with autism such as: autistic aloneness, repetitive and ritualistic behaviours, social impairment and such forth. Kanner’s work provided the bedrock for what autism is, and all consequent papers are built upon the foundations that he provided.

Hans Asperger

Kanner was not alone in identifying autism. A year after “Autistic disturbances of affective contact”, a paper was published by Hans Asperger titled “Autistic Psychopathy” (1944). Asperger’s paper was also based upon observations of a separate group of children. Asperger described these children as possessing “a fundamental disturbance which manifests itself in their physical appearance, expressive functions, and indeed, their whole behaviour. This disturbance results in severe and characteristic difficulties in social integration” (p.37).

There are other striking similarities between the papers, each describes their participants’ appearance, family background, demeanour, medical and social history, and much more in extensive detail. Each looks at the environmental and family backgrounds.

Yet there are also differences. Kanner paints a clear picture of deficit within his autistic case studies. In contrast, Asperger has moments in which he displays admiration and high regard for his children and their talents.¹ Asperger's introduction states that "[i]n some cases... the problems are compensated by a high level of original thought and experiences. This can often lead to exceptional achievements in later life" (p.37).

Given the proximity of these two publications, and the long-term study of their subjects, there can be no doubt that the two authors were working on their papers at the same time. To what extent the researchers were aware of each other's work, and to what extent they influenced each other cannot be answered. There are myriad factors in the debate of who can be credited with the initial observations of autism. Lyon and Fitzgerald (2007) posit the possibility that Kanner had seen Asperger present his work on the 4th of October 1938 in a paper at Vienna University Hospital titled "Das Psychisch Abnormale Kind". A full discussion of these factors and the original autism research can be found in Lyon and Fitzgerald, but it is not within the scope of the present review to debate the intellectual origins of autism. Yet the ways in which these two authors influenced the field shall be at the centre of much discussion in this thesis, therefore it is important to acknowledge the dual streams of thought and the ways in which they differ, overlap and eventually combine. Throughout this thesis, these two papers shall be referred to as "The Inaugural Papers", as they are the first papers to directly describe what is now commonly referred to as Autism Spectrum Disorder.

¹ Although there is now evidence in "Asperger's Children" by Edith Sheffer that those children Hans Asperger deemed to be low functioning were sentenced to death camps.

Due to myriad factors, discussed later, Asperger's paper was not translated into English until Uta Frith in 1991, since that it has changed the direction of autism research. So much so that, Asperger's Syndrome was recognised as a formal diagnosis in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-4) in 1994. Asperger's Syndrome, due to Hans Asperger's high regard for his subjects, inherited the association with being high-functioning autism, while Kanner's autism was more associated with deficit. Autism (or Kanner's Autism) and Asperger's syndrome were eventually united under the umbrella term "Autism Spectrum Disorder" in the DSM-5, but the Asperger's label is still a useful identifier to many .

The following chapter will focus on the interplay between these two inaugural papers, observing how each has contributed to the autism discourse and how each has shaped society's understanding of autism today. Throughout this discussion, there will be endeavours to unearth the underlying assumptions both these psychologists make about communication, and how these assumptions subtly shape the final conclusions of each psychologist.

Autism as a Spectrum: Lorna Wing

Asperger's Syndrome and Kanner's Autism were coupled into one diagnostic title of "Autism Spectrum Disorder" (A.S.D.). Part of this merger was the acceptance of the autism *spectrum* model. Perceiving autism as a spectrum rather than as a binary choice of autistic or not autistic, allowed for the descriptions of "high-functioning" autism in Asperger's work to be married with the deficit-based descriptions in Kanner's work. The concept of autism as a spectrum is now embedded in society's understanding of autism, to the point that the formal term for autism on the DSM-5 is now "Autism Spectrum Disorder" (A.S.D.).

Lorna Wing, an English psychologist, can be largely credited with a shift towards viewing autism as the spectrum. Wing's work began as a psychologist in London, where she encountered many children who displayed some of the autistic behaviours described by Leo Kanner. Yet Wing did not feel that Kanner's work satisfactorily described the entirety of the autistic population that she knew. Wing noted that while these children displayed autistic behaviours, they would often go undiagnosed, as they did not meet the full criteria for an autism diagnosis. Consequently, these children would go unsupported.

To understand these cases Wing searched for other descriptions of autism and encountered the work from Hans Asperger. As Wing encountered this literature before its translation by Uta Frith, she asked her husband, John Wing, to translate it (see Silberman 2015 p.249). Consequently, Wing first uses the term "Asperger's Syndrome" in 1981, sometime before the term became more widely available in the English-speaking world. Although Wing was not the first to use the term "Asperger's Syndrome" (see "German Infantile Autism", by Gerhard Bosch, 1970), it was Wing's usage that introduced it to the English-speaking world and finally contributed to the change in nomenclature and diagnosis as discussed above.

Hans Asperger's work answered many of Wing's questions. Asperger's work presented a less rigid description of autism than Kanner's which better described the children that Wing had encountered. Therefore, Wing adopted large parts of Asperger's work and in doing so took the first steps to describing autism as a spectrum. Wing first introduced this concept in the 1980s, although originally using the term "Autism Continuum" before moving to "spectrum". Wing thought that "continuum" suggested "an incremental gradient of severity, from least to most

severe” while spectrum “was suggesting something more individualized, nuanced and multidimensional” (Silberman p.353).

Of Wing’s introduction of Asperger’s Syndrome, Steve Silberman writes that the use of “Asperger’s Syndrome” was “less a strictly empirical decision on her part and more like smart marketing.” (2016 p.252). At the time of Wing’s work, Kanner’s autism had begun to develop a set of negative social stigmas. Not least the “Refrigerator Mother” model which identified a deficiency in caring parents as the cause of autism. Silberman supports this claim with a quote from Wing herself:

“Parents without special experience tend to overlook or reject the idea of autism for their socially gauche, naïve, talkative, clumsy child, or adult, who is intensely interested in the times of tides around the coast of Great Britain, the need for the abolition of British Summer Time, or the names and relationships of all character who have ever appeared in a television soap opera, such as Coronation Street. The suggestion that their child may have an interesting condition called Asperger’s syndrome is more acceptable” (Wing in Silberman p.252)

Treating Autism: Applied Behaviour Analysis

Kanner descriptions of deficiency proved to be pervasive, and a history of attempting to cure or treat autism emerged. Treatments have been wide a varied, some focussed on rebuilding relationships such as “holding therapy”, which required the mother to “tame” the autistic child by hugging them for an hour each day, gazing into the eyes and confessing their inner most feelings (Silberman 2015 p.60). Others offered other causes for autism and focussed on other aspects of autistic people’s lifestyle, offering solutions such as the gluten and casein free diet (G.S.C.F.).

Purveyors of this approach believed autism derived from vaccines inhibiting children's ability to digest these proteins which then affected their brains.

With no clear cause of autism, it is unsurprising that there is such a varied and ever-changing landscape of treatments. The most popular (and profitable) methods of treating autism have focussed on directly addressing autistic behaviours. The clear front runner in this field has been Applied Behaviour Analysis.

Applied Behaviour Analysis (henceforth A.B.A.) is a strictly empirical methodology which adopts the principles of operant conditioning to unlearn autistic behaviours and learn non-autistic behaviours. It is a form of behaviour modification rooted in the behaviourist principle of motivated learning. Autistic behaviours are systematically targeted for negative reinforcement. Meanwhile, behaviours that are desirable are positively reinforced when displayed.

Steve Silberman describes the application of this approach in a recount of the A.B.A. therapy received by a young autistic child named Anne-Marie:

“...the child was rewarded with M&Ms, sips of apple juice, and phrases like “Good job” for doing things like making eye contact and sitting at a table, and punished with a loud “NO!” for hand flapping and stimming” (2015 p.61).

Silberman's description shows the use of positive rewards: sweets, apple juice and verbal praise for the exhibiting of behaviours that are typically viewed as lacking in the autistic community (i.e. eye contact). Meanwhile the description also shows the use of an aversive (loudly shouting “no”) in response to the characteristic autistic behaviour of stimming (self-stimulating behaviour i.e. flapping of the hands).

A.B.A. was not initially formulated for the treatment of autism and was founded through researching instructional control and teaching language to children with

communication delays. It wasn't until the 1960s that A.B.A. became a tool for the treatment of autism. A.B.A.'s enduring association with autism therapy is largely a result of the work of Ole Ivar Lovaas.

Lovaas' earlier career initially focussed on communication delays, and his work led him to a clinic for autistic children. It was at this clinic that Lovaas met a young autistic child named Beth (p.375). Lovaas worked with Beth over sustained and intensive period, during which Lovaas began to introduce the behavioural intervention techniques. By the end of Lovaas' work with Beth, he was able to publish his early findings on A.B.A. and autistic treatment.

Lovaas expanded his research and noted that autistic people showed signs of lessening autistic behaviour when subject to behaviour modification and motivated learning. However, by 1973 Lovaas observed that most autistic children reverted to their pre-intervention behaviour once they left the institute. While the behavioural intervention showed the capacity to build complex behaviours such as language, and suppress pathological behaviours such as aggression, the results were specific to the environment in which the treatment occurred and, if treatment did not continue, they would be relapse over time.

These findings prompted Lovaas to abandon the concept of institutions as effective places of treatment and to begin the initiation of home-based interventions. A.B.A. became an intensive experience and was designed to be totally immersive, with A.B.A. being practiced 20 to 40 hours a week, at home, in education and with other designated professionals. Treatment was no longer localised but was instead encoded into almost every setting in the subject's life. Lovaas wrote that:

“behaviour intervention... sought to maximize behavioural treatment gains by treating autistic children during most of the waking hours for many years. Treatment included all significant persons in all significant environments” (1987 p.3)

Lovaas was introducing operant conditioning into every aspect of the autistic child's life. With regards to reinforcement Lovaas emphasised his use of positive reinforcement, but was known to use low doses of electric shock, slaps to the thigh and other negative reinforcement in cases of self-harm, life threatening behaviour etc. Contemporary A.B.A. does not use aversive methods of negative reinforcement following a movement away from such methods in the late 1980s. In 1986 Anne Donnellan published a book called “Alternative to Punishment” and the directors of the “Autism Society of America” banned aversive methods in 1988 (Silberman 2015 p.323). Around the same time, Lovaas himself felt that “non-aversive interventions had become so sophisticated and successful that aversive were no longer necessary”, he stopped using aversives in his own clinic (Smith and Eikeseth 2011 p.377).

The research of intensive and immersive application of behavioural modification, culminated in the publications of Lovaas' flagship paper in 1987: “Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children”. In this paper, Lovaas claimed that 47% of his A.B.A. group achieved normal intellectual and educational functioning because of the methods, compared to just 2% of his control group (1987 p.7). While Lovaas would publish much more throughout his long career in A.B.A. and autism, it is this paper that formed the basis of his thinking, and it is still referenced today to support the use of A.B.A. on autistic people.

Psychological Theories of Autism

The works of Kanner, Asperger, and Wing allowed autism to become a defined and diagnosable condition. Yet these definitions were based entirely on observations of behaviour. In the 1980s, a new wave of research emerged, asking which psychological factors were underpinning this behaviour. As most of the works available in the 1980s were rooted in a deficit perspective of autism, this question mostly resulted in researchers attempting to describe the central deficit of autism.

The behavioural-based observations and the following psychological-based research are not opposing viewpoints. Instead, the psychological approach represents a shift in focus. Where the initial wave of autism research was asking *how* autistic people behave differently, the psychological researchers then asked *why* autistic people behave differently.

The psychological-based research relied on the preceding descriptors of autism. The psychologists used the behaviour descriptors to indefinitely the autistic population, before seeking for the psychological variations within their participants.

Consequently, the psychological approaches largely shared the same pre-suppositions of autistic deficit that were seen in Kanner's initial description of autism. Each paper's task was to identify the core deficit that makes autism, autism. The papers asked how an autistic deficit differs from deficits in other conditions. Since the 1980s and the rise in popularity of asking these questions, many theories have been posited. The most prevalent of these findings are detailed below.

Executive Dysfunction

One such answer to the question of autism's central deficit is the Executive Dysfunction Theory. The Executive Dysfunction Theory posits that the core deficit of

autism is a deficiency in “Executive Function”. Executive function is the capacity for goal-orientated, forward thinking. In the words of Ozonoff et al:

“Executive function is defined as the ability to maintain an appropriate problem-solving set for attainment of a future goal; it includes behaviours such as planning, impulse control, inhibition of prepotent but irrelevant responses, set maintenance, organized search, and flexibility of thought and action” (1991 p.1083)

Executive function was first coined by Steel, Gorman and Flexman in 1984, but their work did not focus on autism, instead focussing on people who sustained damage to their pre-frontal lobe. Steel et al also devised several tests, such as the card sorting test, to assess whether another person’s executive dysfunction.

Uta Frith provides a description of how executive dysfunction manifests itself in everyday life:

“Executive abilities are not needed for routine actions, for instance, well-practiced skills such as walking and eating. They are needed, however, when a change of plan occurs, and more generally, whenever routine behavior [SIC] no longer suffices. Executive abilities are crucial for keeping several tasks going at the same time and switching between them” (1989 p.177).

There are many parallels between this description and the children described by Leo Kanner. Kanner’s children were often described as routine driven and quick to anger when returns were changed or interrupted. A common feature of Kanner’s autism was the repetitive behaviours featured by autistic children.

Yet it wasn’t until 1985 that executive dysfunction in autism was first proposed by Rumsey. Rumsey proposed that a deficit in executive function explained many of the

behaviours that had been observed in autism. Simon Baron-Cohen (2008 p.52), summarised this point below:

“[a]ccording to this [executive dysfunction] theory, this can explain the repetitive behaviour in autism, since if you cannot plan actions or shift attention, your behaviour would become ‘stuck’ in the same groove, unable to move flexibly onto a new plan or path. You would, according to this theory, be destined to repeat or *perseverate*” (italics original).

The first empirical study of autism and executive function was performed by Rumsey later in 1985. Rumsey refers to executive function as “conceptual problem solving” (1985 p.24). Rumsey’s work separates the social impairments associated with autism from the cognitive deficit associated with Kanner’s autism. Therefore, his study includes autistic people with average or above IQ who still exhibit social impairment. Rumsey then has his autistic participants perform the Wisconsin Card Sorting² Test (a neuropsychological assessment designed to test one’s ability to adapt strategies to meet new circumstances) to assess their conceptual problem-solving ability. Rumsey’s finding supported the notion of an autistic deficit in executive function.

Weak Central Coherence

A further psychological theory to describe the core deficit of autism is the theory of weak central coherence. Weak Central Coherence Theory posits that the deficit of autism lies in the inability to see the ‘bigger picture’. Autistic people are depicted as extremely detail orientated but lacking the ability to integrate these details and construct a coherent picture of the ‘whole’. For example, an autistic person may be

² A full discussion of the Wisconsin Card Sorting test will be provided in Section 5.2 on Executive Dysfunction Theory.

able to join a jigsaw together by using fitting the different shapes together, but not notice the picture that they are building.

Like all the other psychology theories contemporary to this theory, the theory of weak central coherence is rooted in deficit, but there is also scope for recognising autistic strengths. While autistic people may inherently miss the bigger picture, they may thrive on tasks that require great attention to detail. In short, this theory posits that autistic people focus almost entirely on the finer details, to the detriment of seeing being able to recognise a cohesive collective.

Autistic focus on the fine detail dates right back to the initial observations of autism from Leo Kanner, who noted one child's habit of noting order of books on a bookshelf:

“On one of the bookshelves, we had three pieces in a certain arrangement. When this was changed, he always rearranged it in the old pattern” (1973 p.9).

But the first formulated psychological theory of autistic penchant for detail came from Uta Frith in her 1981 work “Explaining the Enigma”. Indeed, it was noting different children's methods of completing a jigsaw that led Frith to formulate Weak Central Coherence Theory.

Frith and Hermelin had investigated the puzzle solving abilities of autistic individuals in 1969 and observed that the autistic child would put the jigsaws together based upon the shape of the pieces, rather than the picture upon the pieces. In this way, the autistic child could complete the jigsaw just as easily when the pieces were placed face down as they could when the pictures were visible to them.

Frith and colleagues tested these observations with jigsaw-based studies and found that their conclusions were consistent. The theory derived from this jigsaw

experiment was then extended to wider autistic life. Frith formulates a theory of autistic contextualisation which resolves around one or two elements of context rather than creating a holistic view of a situation. Frith's theory is consistent with the socially detached descriptions of autism derived from the works of Kanner.

Theory of Mind

The psychological approach towards autistic deficit that is most widely recognised is the theory of mind approach. The theory of mind approach, sometimes referred to as mind-blindness theory, posits a theory of autistic deficiency centred around the ability to conceive the mental states of others. The approach was developed throughout the mind to late 1980s, after the publication of 'Does the autistic child have "theory of mind"' by Simon Baron-Cohen, Alan M. Leslie and Uta Frith.

The initial conceptualisation of theory of mind predates its application to autism, theory of mind was first being used by Premack and Woodruff in 1978. Premack and Woodruff formulated a theory of theory of mind in relation to whether chimpanzees could impute mental states to each other. By asking if another being has theory of mind, Premack and Woodruff are asking if the being can recognise the mind of other beings, and attribute mental states to that mind. In their own words:

“[i]n saying that an individual has a theory of mind, we mean that the individual imputes mental states to himself and to others” (p.515).

For example, a being with theory of mind might be able to recognise the purposes and intentions of other beings. Or the being can recognise other states of mind such as the ones in italics in the Premack and Woodruff quote below:

“John *believes* in ghosts; he *thinks* he has a fair chance of winning,; Paul *knows* that I don’t *like* roses, she is *guessing* when she says that; I *doubt* that Mary will come; Bill is only *pretending*” (ibid, italicise added).

These examples are far from exhaustive, other states of mind are recognised such as “promise” and “trust” (ibid). Further feats of theory of mind are also possible, such as “second-order theory of mind”. In Premack and Woodruff, second-order theory of mind is named embedding.

The prevalence of the theory of mind approach is such that Reddy and Morris (2004) note that 1% of all psychological research published between 2003 and 2004 referred to theory of mind. Second-order theory of mind is attributing state of mind to another mind i.e. “Mary knows that John thinks he will win” (ibid). There is also third order “Harry doubts that Mary knows that John thinks he will win” (ibid) and so on. Premack and Woodruff state that “[h]uman limits on embedding are not impressive: only about four steps make our specifics uncomfortable” (p.515 – 516).

The paper that first brought theory of mind into the discussion of autistic deficiency was “Does the autistic child have “theory of mind”” by Simon Baron-Cohen, Alan M. Leslie and Uta Frith in 1985. Baron-Cohen et al, note that theory of mind relies on the ability to form “second-order representations” (Dennett 1978 and Pylyshyn 1978 in Baron Cohen et al p.38). Baron-Cohen et al also recognise research stating the second-order representations are also a necessary step in pretend play (Leslie in Baron-Cohen et al p.38). Consequently, “[a]n absence of the capacity to form second-order representation, then, would lead not only to a lack of theory of mind... but also to a lack of pretend play” (Baron Cohen et al p.38). Or, in short, a lack of pretend play can be evidence of a lack of theory of mind.

Finally, Baron-Cohen et al cite work from several researchers who have observed a “striking poverty of pretend play” in autistic children (see Sigman & Ungerer 1981, Ungerer & Sigman 1981, Wing et al 1977, Wing & Gould 1979). Baron-Cohen et al, then follow the argument that an autistic population lacking in pretend play, may be evidence that the populations lack a theory of mind.

The thread of thought above demonstrates the thought process behind the theory of mind approach. Many attempts have been made to support this approach, such as the use of false belief tasks. The most famous false belief task being the Sally-Anne marble test used in Baron-Cohen et al, which uses puppets to create a false belief task that requires autistic children to project a state of mind onto one of the puppets (p.41).³

The theory of mind approach is pervasive, and still widely drawn upon in autism research. It is linked to heavily to stereotypes and theories alike, which portray autistic people as lacking empathy for others.

Empathising Systemising Theory

One such theory that is derived from the theory of mind approach, is the empathising-systemising theory. The Empathising Systemising Theory proposes a model of autism which based upon two central components. The first component is a deficiency in empathising. The second is an enhanced capacity, and drive, for systemising. It is these two psychological traits combined, that uniquely characterise autism.

The empathising-systemising theory was also developed by Simon Baron-Cohen, and it was his response to common critiques of the above theory of mind approach.

³ A full discussion of the Sally Anne test will be provided in Section 5.4 on Theory of mind.

One such critique was that the theory of mind approach only managed to account for the social deficiencies described by Leo Kanner and other researchers. It did not explain the narrow interests and repetitive behaviours in these accounts. Therefore, Baron-Cohen combined his theory of mind approach, with a theory of systemising. Systemising is the ability to construct and assess systems. A system is loosely defined as anything that follows a set of rules. Systemising is said to be a strength of the autistic population, with autistic people being particularly good at identifying the rules that govern a system.

Returning to the empathising component of the theory, Baron-Cohen break empathising down into two parts. The first part is 'cognitive empathy', cognitive empathy is the principle of theory of mind. It is the ability to impute mental states to others.

The other component of empathising is said to be "affective empathy". Affective empathy is the response element of empathy. It is the ability to perform an action in a manner that attends to the mental state that you have imputed to another person. Affective empathy is defined by one's ability to react *appropriately* to the results of cognitive empathy.

Autism is not merely a penchant for systemising and a deficiency in empathy. Instead, autism is defined by Baron-Cohen as a discrepancy between the two. The larger the discrepancy between the two abilities, the larger the likelihood that a person is autistic. Showing a deficiency in both empathising and systemising would not qualify as autistic. Baron-Cohen laid this theory out in his 2009 paper, "Autism: The Empathising Systemising (E-S) Theory":

“According to the empathizing–systemizing (E-S) theory, autism and Asperger syndrome are best explained not just with reference to empathy (below average) but also with reference to a second psychological factor (systemizing), which is either average or even above average. So, it is the discrepancy between E and S that determines if you are likely to develop an autism spectrum condition (p.71).”

E-S Theory’s basis in the T.o.M. approach mean that they share the same ancestral roots regarding autism theory. However, the additional elements of a response component of empathy, and of systemising provide a new dimension of thought. Notably the inclusion of a beneficial side to autism under the heading of systemising seems to adopt some of Asperger’s approach.

1.4.4 Chapter Overview

Chapter 1: Introduction

The dual central functions of this introduction are to introduce the problem statement about present autism research and then the tools with which this thesis plans to address the problem. There is also coverage in this chapter of other essential knowledge, such as terminology choices and a summary of autism research as it stands.

The problem statement is centred around the lack of a cohesive philosophy of communication throughout significant bodies of autism research. While the tools introduced to address this are an integrationist philosophy of communication and a participatory model of autism research.

The other concepts introduced, include an introduction to the landscape of autism research. While each paper is discussed in relative isolation, it is important to understand the wider network of influences within the field. Through this the

perpetuation of certain beliefs can be seen in some camps, and likewise the deviations from common practices can be seen where new camps are created. While this mapping of the factions of autism research is brief, it is invaluable for understanding how this thesis is building from past papers towards a new future in autism research.

A discussion of terminology is provided as a conscious effort has been made to make language choices that reflect the beliefs and principles of this thesis. The rationale for each language choice is provided at length, this is not to say that the terms used here are *correct* but merely that their selection was purposeful.

Finally, the seminal autism papers chosen for this thesis are identified. The papers will be contextualised with recognition of the researcher's academic background and where necessary the wider social and political context at the time of their writing.

The primary functions of this introduction are to set the tone for a thesis that is combing through the past for evidence of linguistic beliefs in autism research and then introduce the tools that will be used to progress forward with future research.

Chapter 2: The Inaugural Papers: Kanner and Asperger

Chapter 2 looks at the beginning. In a root and branch analysis of autism, this chapter is looking at the roots. The papers from Kanner and Asperger are the earliest papers to recognise and discuss what we now know as "autism".

The papers will be introduced and contextualised. The contextualisation is important, with both papers being written in a time of war in Europe. There are texts that better contextualise these papers in detail, such as Edith Sheffer's *Asperger's Children: "The Origins of Autism in Nazi Vienna"* and Steve Silberman's *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity*. The discussion in this chapter

will be brief, but it will do enough to demonstrate the impact of the politics and global situation at the time on the dissemination and popularity of these papers. In doing so it gives some indication of the legacy that each paper had on thought in the field of autism.

Then a review of Kanner's paper "Autistic Disturbances in Affective Contact" is begun. An overview of the paper is provided before engaging with a critical analysis of the work through the lens of communication. Kanner's paper has no overt engagement with a philosophy of communication, so the discussion could be almost endless. But instead, features are selected that highlight a legacy of misrepresentation of communication in the consequent works influenced so heavily by this inaugural paper.

A similar review will be provided of Asperger's work, noting the differences between the two papers and recognising the impacts of these differences on the underlying beliefs around communication from each researcher. The distribution of Asperger's work means that the legacy of autism and communication he leaves behind impacts the field differently to Kanner, thus this will be acknowledged in the review also.

These two reviews, and the conclusions that this thesis can draw about both authors attitude towards communication in these papers, will be referred to throughout the thesis. Just as these two papers are the origins of all autism research, so too are they the origins of misconceptions about communication in autism research.

Chapter 3: Autism as a Spectrum and the Coining of Asperger's Syndrome: Asperger, Frith, and Wing

Two of the most synonymous concepts added to the original observations of autism are those of the "autism spectrum" and that of "Asperger's Syndrome". These were

introduced in the wave of autism research that followed the translation of Hans Asperger's paper. There is a long history between these observations, which originally appear to diverge from the work of Leo Kanner in a few ways, but ultimately, they are reconciled with Kanner's work to provide a more unified understanding of autism, at least as far as the medical model is concerned. That history will be the focus of the beginning of this chapter. Recognising the nuance of influences and balancing of concepts is key to this thesis' understanding of how communication is presently viewed in the field of autism research. As communication is so rarely addressed directly in autism research, such understanding is impossible to gain without a close analysis of the history of thought in the field, and how that thought has evolved.

Chapter 4: Analysis of Lovaas and Applied Behavioural Analysis

Lovaas and his work on Applied Behavioural Analysis occupies a unique place in this thesis. Lovaas' work, while based on theory, is more practical in nature. Lovaas constructed a model of autism behaviour modification, which was rolled out to practitioners and marketed as a treatment for autism. An introduction to this treatment will be provided, reviewing its theoretical links to Skinner and Operant Conditioning.

An analysis of Lovaas' core paper "Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children" is provided. The analysis holds an interesting position in this thesis, as while the work of Skinner is not from a linguistics background, its use in linguistics has already been well documented and engaged with. Therefore, there is a firm grounding for the analysis of communication within this field. Reference will be made to linguistic works such as that of Chomsky

which has engaged with Skinner's work previously, but the focus will be on providing a fresh interpretation of Lovaas' underlying beliefs pertaining to communication.

Chapter 5: Psychological Approaches to Autism

Chapter 5 contains analysis of several papers, all of which have offered popular theories of autistic psychology. Each works towards identifying the central psychological deficit that defines autism.

These theories are:

- Executive Dysfunction Theory
- Weak Central Coherence Theory
- The Theory of Mind Approach
- The Empathising-Systemising Theory

These are certainly not the only attempts from the field of psychology to identify the central deficits of autism, but they are arguably the most influential. Each theory's underlying philosophy of communication will be reviewed individually but being from the same disciplinary roots many consistent themes arise across the theories. These consistencies are referred to and expanded upon to form a coherent critique of this line of research in general, with references to texts from outside of linguistics that have found similar flaws in traditional developmental psychology approaches.

Chapter 6: Towards an Integrationist Future of Autism Research

Chapter 6 is the beginnings of identifying a way forward for researching autism. Where the previous chapters have challenged that which has come before it, Chapters 6 and 7 are dedicated to collating the criticisms and proposing a set of principles for moving forward that do not fall into the same traps.

The first step towards addressing many of these problems is to identify a philosophy of what communication is. Chapter 6 both gives examples of how the integrationist epistemology can be applied to previous studies of autism research and proposes its value to the future of autism research. Concluding that, when combined with certain external principles, integrational linguistics can help to form values upon which future research should be conducted. In doing so, this chapter demonstrates the value that a well-defined philosophy of communication can bring to beginning to understand autism.

Chapter 7: Towards a Future of Foregrounding the Lived Experience

The final chapter introduces Participatory Research into the proposed future for autism research. While Integrational Linguistics is a well-placed philosophy of communication for moving forwards in autism research, it cannot stand alone. It is the belief of this thesis that all future research must be both inter-disciplinary and include the autistic experience. Chapter 7 explores this belief, and how participatory practices can be complemented by an integrationist research perspective.

The chapter opens with a brief history of participatory research in the field of autism. The consequent sections explore areas of similarity and co-operation between the integrationist and participatory beliefs. Delving into each discipline foregrounding of the lived experience, challenging the traditional role of researcher, the need to remove jargonistic terms and so forth. The purpose of this discussion is a starting point for the conversations that need to be had between the two disciplines, demonstrating the inherent compatibility between the two.

Finally, the chapter concludes with a brief exercise that demonstrates a practical example of how the two can be combined in research. The aim here is not to arrive

at any conclusions outside of the proposed methodology, but instead to demonstrate the methodology in action.

Chapter 8: Conclusion

Chapter 8 provides a concise summary of the thesis. The aim of the conclusion is to emphasise the connection between challenging past research's understanding of communication and arriving at a radical new methodology. While communication may just appear to be another term within a sea of autism research, the way it is conceptualised and researched directly impacts upon society's understanding of autism. The existing methodologies of researching autism are only sustainable for as long as communication remains ill-defined and quantifiable. To challenge what communication is, is to challenge the very future of autism research.

The conclusion will foreground the above radical points and remind the reader of justification for them that has been provided throughout the thesis. To align with the finishing principles of the thesis, the conclusion will align the points made in this thesis with autistic voice. In doing so the thesis hopes to demonstrate that the problems addressed in this thesis are not abstract nor are they new. The problems have been highlighted by members of the autistic population and are affecting their lives in a very real way.

Chapter 2 - The Inaugural Papers: Kanner and Asperger

2.1 Introducing the Inaugural Papers

Two papers can be credited with being the first to capture the phenomenon now known as autism. These papers are from the Austrian, Leo Kanner and the German, Hans Asperger.

Each of these papers has dramatically contributed towards the shaping of the autism research landscape. For many years, Kanner's paper provided the sole foundation for all understanding of autism. Once Asperger's work was translated it introduced many concepts that are now commonplace such as "the spectrum", "high and low functioning autism", and more. These will be covered in the next chapter.

2.2 A Review of Communicative Philosophy in Leo Kanner's "Autistic Disturbances in Affective Contact" (1943)

2.2.1 Introduction to "Autistic Disturbance in Affective Contact"

In 1938, a group of children came to the attention of psychiatrist Leo Kanner. Kanner observed that the condition of these children "differs so markedly and uniquely from anything reported so far (p.217)". Kanner collected data on these children, made observations about their behaviour, and characterised the commonalities in the children's behaviour as syndrome he named "autism". These eleven children, all below the age of eleven, formed the basis for Kanner's first description of autism.

Kanner noted that an "essential common characteristic" in these cases "form a unique "syndrome" (p.242). The fundamental nature of this syndrome was an

“inability to relate themselves in the ordinary way to people and situations from the beginning of life (ibid).”

Leo Kanner’s study formed the first published description of autism. Kanner’s study has impacted upon every diagnosis, study, and characterisation of autism ever since. Kanner’s identification of the “essential common characteristic” of autism, created the foundation for the entire concept of autism as it is today.

2.2.2 An Overview of “Autistic Disturbance in Affective Contact”

Before going into detail of his new syndrome, Kanner provides a detailed case study of each of the eleven subject children. The case descriptor covers several areas of the children’s life. Including a detailed description of medical history (birth weight, infant feeding habits etc), birth circumstance (caesarean, complications etc.), behaviour at various points in the child’s life, communication habits and abilities, interests, cognitive capacity, social behaviour, parental descriptions of the child, dislikes, grammar usage, temperament, physical appearance, previous psychological observations, parenting methods, parent’s education and profession etc.

In his discussion of these observations Kanner opens by noting the differences in “degree of disturbance, the manifestation of certain features, the family constellation, and the step-by-step development in the course of years” (p.242). Yet it is not the differences between participants that interested Kanner, but their similarities: “even a quick review of the material makes the emergence of a number of essential common characteristics appear inevitable”. It is these characteristics that form the basis for his descriptors of the autism syndrome.

The central commonality among these characteristics is identified by Kanner to be “the children’s *inability to relate themselves* in the ordinary way to people and situation from the beginning of life” (ibid, emphasis original). Kanner emphasizes that this is not a divergence from pre-existing relationships, nor a withdrawal from society. Instead, it is an ever present “extreme autistic aloneness” (ibid) from the onset. According to Kanner, autistic people “wherever possible, disregard, ignore, shuts out anything that comes to the child from the outside” (ibid). Kanner supports the claim that this from birth by discussing anticipatory movements in young children. He draws on a study from Gesell who observed children of 4 months making anticipatory movements when about to be picked up. Kanner that provides parental observations of the autistic children which noted that they “failure to assume at any time an anticipatory posture” (ibid).

“There is an all-powerful need for being left undisturbed. Everything that is brought to the child from the outside, everything that changes his external or even internal environment, represents a dreaded intrusion (p. 244).

Kanner reports such a desire to keep the “outside world” away, that autistic children would even refuse food. Loud noises, and moving objects are also intrusive with “horror” being shown at “tricycles, swings, elevators, vacuum cleaners” and more (p.245).

Recital and rote memory are noted by Kanner to be prevalent amongst almost all the autistic children. Kanner writes that many of the parents had “stuffed” their children with lists and verses in compensation for the “inability to use language in any other way (p.243).

The rote repetition is also reflected in the children's "noises and motions and all of his performances ... [being] as *monotonously repetitious* as... his verbal utterances (p.245, emphasis original). Kanner believes this repetitive behaviour to be motivated by an "*anxiously obsessive desire for the maintenance of sameness* that nobody but the child himself may disrupt" (p.245, emphasis original). Kanner forms an opinion of a dread of change in the autistic children.

Kanner discusses the ability of speech in his group. In his sample group he notes that several children are "mute", while several others are acquired language late. Yet in none of the children is language used "to convey meaning to others". Language is mostly used in the rote recital of songs, lists, or prayers. Otherwise, it is used for the tasks of naming (p. 243). Kanner interprets that there is "no fundamental difference" in communicative functions of speech between the verbal and mute children in the study (ibid).

Kanner also introduces the concept of autistic echolalia. Kanner describes it as "mostly parrot-like repetitions of heard word combinations". Echolalia, either immediate or the use of "stored" language, is used for affirmation in the autistic children. Affirmation is a feature of language that Kanner believes is particularly slow to acquire in the autistic children. Literalness in this sense is reported by Kanner and the parents to extend to "putting things down" leading to things being put on the floor and other examples.

Echolalia has also led to the 8 vocal children repeating pronouns just as they are heard (p.244). For example, "[n]ow I will give you your milk" is used by a child to indicate to his mother that he desires milk.

2.2.3 Critical Analysis of Philosophies of Communication in “Autistic Disturbances in Affective Contact”

Autism: Nature or Nurture

While the inaugural paper pays little attention to the origins or causes of autism, we know from Kanner’s later work that he believed it to be a result of the child’s environment while developing. There are several hints to Kanner’s position in “Affective Disturbances in Affective Contact”, and it will be these references that are drawn upon here to demonstrate the impacts of Kanner’s perspective on the field of autism.

Kanner provides extensive overviews of the environments in which the children were raised. His overview pays heed to the parents, including details about their intelligence, appearance, behaviours, professions, and more.

Kanner also discusses a concept he labels “stuffing” (p.243) in some detail. The main concepts behind stuffing are unpicked below, but it is essentially providing the autistic children with numerous poems, songs, lists, and other such rote memory speech acts for them to reproduce later. Kanner observes this to be prevalent in all the autistic children’s lives, and that rote repetition was used in place of original communicative language. On the effects of stuffing Kanner writes:

“It is difficult to know for certain whether the stuffing as such has contributed essentially to the course of the psychopathologic condition. But it is also difficult to imagine that it did not cut deeply into the development of language as a tool for receiving and imparting meaningful messages” (p.243).

Kanner’s discussion of stuffing cannot entirely explain the autistic phenomenon. Stuffing by parents occurs due to the prestigious nature of the child’s ability to

receive songs, facts, names, lists, and such is a response to an autistic characteristic. Where this original characteristic originated from, that led to parental stuffing, is not explained by the fact that the parents do stuff.

There is a chicken and egg question within this observation too. Are children adept at stuffing due to exposure to it, or are children exposed to stuffing because they are adept at it? Such circularity requires an answer from outside this cycle. Such an answer was later provided in the Refrigerator Mother Syndrome theory, which Kanner's work was at the heart of.

In this theory autism is seen because of cold and distant parenting, most notably from the mother figure in the autistic child's life. The early seeds for this theory of parental distance are seen in "Autistic Disturbances in Affective Contact", where Kanner writes that:

"[i]n the whole group, there are very few really warmhearted fathers and mothers"
(p.250).

Consequently, we know that the Kanner school of thought favours the theory that autism is acquired. It is acquired through early childhood experience of social relationships (refrigerator mother) and different experiences of communication (such as stuffing) which divert autistic communication from a communicative norm.

Whether the communicative norm is acquired or innate is not stated, but the fact that Kanner is writing pre-Chomsky⁴ suggests that he believes language and communication to be learnt rather than naturally encoded.

⁴ More on Noam Chomsky to be seen in the Chapter 4.

The Contribution of the Lay Perspective of Normalcy in Kanner's Work

Kanner was not the first person to describe the behaviour of this group of children. The first published descriptions of these children, and their behaviour, comes from the parents. Kanner elicits these descriptions to inform the selection of the group. His publication included the parental descriptions.

The referral of these children to Kanner, and Kanner's consequent selection of these cases for his study, comes from parental descriptions of behaviour. Not only do these parental descriptions inform Kanner's work, but they also provide evidence for child behaviour beyond the parameters of Kanner's observations. Providing evidence of autistic behaviours in other environments and at other ages.

Consequently, parental perspective is important in Kanner's work, presumably hence its inclusion in the publication. Parental perspective, curated by Kanner, contributes towards the basis of the coining of autism and recognition of the syndrome. Without these initial observations, there is no object of Kanner's study.

To recognise the importance of the parent's contributions is to recognise that lay perspectives of behaviour have been at the centre of autism research since its inception. The parents, in most cases, are not trained professionals, their observations are based on life experience alone.

Based upon life experience, these parents noted a marked difference in the behaviour of their child from other children. There is no categorisation of this behaviour, no connecting this behaviour to other children or the forming of a syndrome. But the eleven children, observations of whom formed the foundation of all knowledge of autism, were originally noted as different from their peers by their

parents. The first steps on the journey of autism research were steps informed by a lay person's perspective of normalcy.

The parents described their children as "self-sufficient", "like in a shell", happiest when left alone", "acting as if people weren't there", "perfectly oblivious to everything about him", "giving the impression of silent wisdom", "failing to develop the usual amount of social awareness", "acting almost as if hypnotized" (ibid). Kanner summarises these parental views as there being an "extreme autistic aloneness, that wherever possible, disregards, ignores, shuts out anything that comes to the child from the outside" (ibid).

Without lay people observing a difference in the behaviour of their children and presenting them for psychological observation and eventually Kanner's observation, there would be no initial group for studies of autism.

The role of the lay perspective is important as it is a hidden steering factor behind what sort of children would inform society's first impressions of autism. Firstly, any autistic child that was successful at masking autistic behaviours stands a significantly reduced chance in coming to Kanner's attention. Secondly, only children who do not meet their parent's criteria for normality will make it to the point of observation.

Finally, parent's need both the means and resources to get their child to the point where Kanner would be aware; parent's need both the critical faculty to engage with the child's development and the financial capacity to bring the child's needs to the attention of psychologists. As a result, the children, the children tend to be from wealthier and better educated families. Most importantly, the children are, in part, originally selected for Kanner's study, based on a lay perspective about normality. A discussion of normativity in Kanner is provided later.

Regarding the characterisation of the children's social and communication behaviour, Kanner's own observations perpetuate the same beliefs as the parents. H Kanner is describing a group of children who are distanced and disengaged. Below are some of the descriptors Kanner uses for the first child that he observed:

Donald T:

- "Innumerable verbal rituals"
- "Irrelevant utterances... were his ordinary mode of speech."
- "He always seemed to be parroting what he had heard said to him."
- "He used the personal pronouns for the person he was quoting."
- Words to him had a specifically literal, inflexible meaning"
- "He seemed unable to generalise."
- "Dom expressed his agreement by repeating the question literally"
- "He paid no attention to persons around him."
- "Commands or actions that could not possibly be disregarded were resented as unwelcome intrusions."
- "He gave no heed to the presence of other children."
- "His relation to people had developed only in so far as he addressed them when needed or wanted to know something. He never looked at the person while talking and did not use communicative gestures."

(p.217-222).

The narrative of autistic aloneness is fed by more feedback from the parents as Donald T. develops. With letters stating, "Don [sic] is still indifferent to much that is around him" and "he has never asked questions about people and shows no interest in our conversation" (ibid).

Kanner's work continues in a similar fashion for the other ten children. With similar observations being made. Perhaps it was inevitable that Kanner would reach these conclusions.

Echolalia, Language and Recital: An Insight into Meaning in Kanner's Work

Kanner uses two broad criteria to categorise the communicative ability of the children in his study. The first criterium is simply the "ability to speak". On one side of this criteria are eight of the eleven children who acquired the ability to speak either at the usual age or after some delay. On the other side of this criteria are the three children remained "mute".

From here Kanner further categorises the speaking children by the ability to create meaning. In Kanner's view, being able to use language, does not equate to being able to create meaning. He writes that "in none of the eight speaking children has language over any period of years served to convey meaning to others" (p.243). Consequently, the children in Kanner's study can either be described as mute or speaking but without conveying meaning. Consequently, Kanner identifies autistic linguistic communication as non-verbal, or non-meaningful, in contrast to non-autistic communication where language is both verbalised and meaningful.

Kanner provides little discussion of his concept of meaning. There are no semantic philosophies drawn upon, no criterion laid out for what constitutes as meaningful, and no overt examples or descriptions of how meaning is communicated in "normal" language use. However, there are clues throughout Kanner's descriptions of autism as to what he believes to be communicative.

Recital

One of those clues comes in Kanner's discussion of recital and rote repetition. Of those who are verbal but do not convey meaning, Kanner writes that in almost all the speaking cases, the parents reported that their children had:

“...learned at an early age to repeat an inordinate number of nursery rhymes, prayers, lists of animals, the roster of presidents, the alphabet forward and backward, even foreign-language (French) lullabies (ibid).”

These children displayed a linguistic capability beyond most other children for their age. Being able to reproduce complex linguistic utterances even in foreign languages. Other than these recitals, however, each child is reported to have taken a long time to:

“put words together. Language in these children exists largely for the purpose of naming of nouns, identifying objects, adjectives to indicate colour and numbers indicating “nothing specific” (p.243).

Kanner describes an autistic language that is either the regurgitation of rote learning, or an entirely simplistic tool for naming and base description. Language is an entirely non-communicative and self-serving device. Clearly then, Kanner's criteria for being meaningful does not include identifying objects, colours, and the non-specific use of numbers.

Yet, in the same quote above, Kanner does recognise these linguistic performances to have been carried out with “purpose”. Consequently, autistic people are purposefully, consciously, and deliberately using language in some contexts. It is not entirely an absent, automatic process. Yet Kanner's description show that the

purpose is not to convey meaning to others. The indication of objects, colours etc. outlined above, are for personal indication.

Thus, the first conclusion about Kanner's view of communication is that for language to be meaningful, it must convey meaning to another person. Self-serving language is non-meaningful, and non-communicative. Purpose alone does not equate to meaning.

From the same discussion a further conclusion about Kanner's philosophy of meaning can be drawn. Kanner holds that the burden of meaning rests entirely on the shoulders of the speaker. Meaning and communication are not acts of collaboration, nor is there a responsible role held by the listener. A non-communicative and meaningless act is such due to the actions of the speaker, and nobody else. Kanner writes that there is no difference in the communicative ability of the speaking children and non-speaking children:

“As far as communicative function of speech are concerned, there is no fundamental difference between the eight speaking and the three mute children” (p.234).

Kanner further adds that autistic language is not used for the purpose of communication:

“language – which the children did not use for the purpose of communication was deflected in a considerable measure to a self-sufficient, semantically and conversationally valueless or grossly distorted memory exercise” (p.234).

The autistic person is not “using” language to convey meaning, or “using” language for the purpose of communication, the “communicative function” is on par with the mute participant's language use. There is no acknowledgement of the listener's role in creating meaning. No model that includes a process of “decoding”, or of any other

process of interpretation has been adopted here. Communication is communicative in nature due entirely to the actions of the speaker. Through these quotes, Kanner repeatedly demonstrates that communication is an entirely productive process. There is no evidence that the receptive party any role in making language use communicative.

To summarise Kanner's philosophy of communication in describing autism so far, autistic language is not communicative. There are no designated criterion for what constitutes communicative, but it is possible to state that it must involve the purpose of conveying meaning to another. Language that is purposefully self-serving is not meaningful. The burden of being meaningful rests entirely on the shoulders of the speaker. These underlying beliefs about communication come to a head in Kanner's description of what is now a cornerstone of autism research, echolalia.

Echolalia

Kanner's views on recital and meaning have already been covered. To revisit the centre point of Kanner's work on recital:

“language – which the children did not use for the purpose of communication was deflected in a considerable measure to a self-sufficient, semantically and conversationally valueless or grossly distorted memory exercise” (p.234).

It is a short step from the view that recital is meaningless, to addressing the now well-known feature of autistic echolalia. A commonly used definition of echolalia today comes from Fay (1969 p.39) who described echolalia as “meaningless repetition of a word or word group just spoken by another person”.

Kanner writes that when sentences are finally formed by autistic children they are “mostly parrot-like repetitions of heard word combination (p.243)” in the autistic

children. These repetitions are sometimes immediate but are “often ‘stored’ by the child and uttered at a later date” (ibid). Here Kanner is recognising both immediate and delayed echolalia (respectively). Kanner recognising echolalia in this first group of autistic individuals is seminal, and echolalia has become heavily associated with autism ever since, to the point that it is a stereotype of the population.

Kanner’s discussion of echolalia allows further insight into his construction of a philosophy of meaning. Kanner writes of autistic echolalia that “[a]ffirmation is indicated by literal repetition of a question (p.243)”. Kanner shows here an example here of purposeful autistic echolalia. A direct repetition of the question indicates an affirmative answer. In Kanner’s own observations, the repetition has intended meaning.

Yet the observations of echolalia for the purpose of affirmation seemingly contradicts the previous work that described language as not being used to convey meaning. Clearly the affirmative is being conveyed in a purposeful manner here. Thus, for Kanner not to view autistic language as meaningful, but to recognise this specific intentional and functional application of language, Kanner must view originality as integral to meaningful and communicative language.

Furthermore, Kanner must view function and meaning as two different things. The act of affirmation alone cannot be functional. Otherwise, an autistic person will have demonstrated use of meaningful and communicative language when producing echolalic utterances to indicate affirmation. For Kanner’s views to be consistent, the criteria for meaning must extend beyond the most basic function that is affirmation.

So far evidence of Kanner’s perception of meaning largely pertains to language use. A model has begun to take shape of meaning in interaction that is entirely dependent

on the speaker, entirely inter-personal in nature, original in form, and has value beyond basic function. The next stage of Kanner's work provides evidence of the conceptual basis of a theory of language that lies behind actual language use.

Kanner writes of the relationship between form and meaning. Form being the symbol used to demonstrate the semantic, cognitive grasp of a concept. He writes that "yes" is a concept that takes the children many years to acquire. They are incapable of using it as general symbol of assent" (p.243). Kanner's point is somewhat confused, it is not entirely clear whether Kanner is suggesting that the concept of assent is not formed internally, or whether the symbol for assent ("yes"), has not been attached to it. It cannot be said which Kanner means, or whether Kanner recognises the two as being separate. The work so far demonstrates that Kanner is aware that eventually autistic children learn to use echolalia to indicate assent, suggesting that the concept of assent is not beyond them. Therefore, the premise can be adopted, that Kanner is simply referring to the ability to marriage the form "yes" with the function of assent.

More support comes for this premise when further evidence from Kanner's discussion of echolalic language use and function. Kanner writes of one of the participants in his study Donald, who uses echolalic utterance to indicate that he would like to be lifted on to his father's shoulders:

"Donald learned to say "Yes" when his father told him that he would put him on his shoulders if he said "Yes". This word then came to "mean" only the desire to be put on his father's shoulder. It took many months to detach the word "yes" from this specific situation, and it took much longer before was able to use it as general term of affirmation."

Kanner writes of a simplistic form and meaning relationship from Donald's perspective. The form "yes" carries the meaning "put me on your shoulders". "Yes" does not have the affirmative function. Kanner writes that "[i]t took many months before he could detach the word "yes" from this specific situation, and it took much longer before he was able to use it as a general term of affirmation (p.244)". These observations raise several questions about Kanner's perceptions on language and meaning.

Firstly, Kanner has identified an autistic child using language to "mean" a request to be carried on father's shoulders. Such identification clashes with Kanner's statement: "in none of the eight speaking children has language over any period of years served to convey meaning to others" (p.243)". Donald is using the linguistic component "yes" to convey a specific meaning to his father. The use of the linguistic component "yes" indicates a complex cognitive understanding of personal deixis (me, you), prepositions "on", and interpersonal communication. The only conclusion that can be drawn from such statements is that Kanner does not deem Donald's use of "yes" to be communicative, because it is not a conventional usage of the word.

Yet in contrast, Kanner identifies the work done on anticipatory movements of 6 month of children when their parents go to pick them up. Kanner recognises the meaning behind the anticipatory movement in these 6-month-old children. Yet in the instance of autistic child, "yes" meaning "shoulder carry", Kanner does not extend the same recognition of meaning.

Kanner uses further examples from the children in his study, this time from Alfred's use of prepositions. When Alfred was asked "What is this picture about", he replied "people are moving about" (p.244). Furthermore, John F., was recorded as

correcting his father about pictures on the wall, by saying that the pictures are “*near the wall*” (ibid, emphasis original).

In this case, language must be used correctly to be considered meaningful at all. Such a view would be a very prescriptive and codified view of language. There is no room from creativity, contextualisation, experience, and other such features that have been drawn upon by linguists to understand meaning. There is only “correct language”.

The excursion of the value of correct language usage fits with the model of communication presented:

“As far as communicative function of speech are concerned, there is no fundamental difference between the eight speaking and the three mute children” (p.234).

The ability to produce language, and the ability to produce correct language, are equal in the eye of Kanner. Yet another contradiction emerges within this point, however. Kanner summarises the above examples by writing that “the meaning of a word become inflexible and cannot be used with any but the originally acquired connotation (p.244). Regardless of whether this statement holds any truth, Kanner is writing that autistic people do use language to create a meaning, but that this meaning is inflexible. Yet previously Kanner wrote that autistic language was “semantically and conversationally valueless” (p.234). For autistic people to have used language for a meaning, then the language cannot be entirely semantically and conversationally valueless. It carries, within this framework, the bare minimum value of one, as the language can only mean one thing. Although this is the bare minimum, in the eyes of Kanner, it still varies a value.

2.3 A Review of Communicative Philosophy in Hans Asperger's

"Autistic Psychopathy' in Childhood" (1944)

2.3.1 Introduction to "Autistic Psychopathy in Childhood"

The work of Hans Asperger was published a year later than that of his contemporary Leo Kanner. Yet it wasn't just the later date of publishing that lessened the initial impact of Asperger's paper. Due to language barriers, combined with the international political situation during the 1940s, and Asperger's own political alignment, Asperger's work did not make it into English speaking consciousness until much later than Leo Kanner's did.

It is not within the scope of this study to provide a full discussion of Asperger's life and crimes. Yet it cannot be entirely ignored for two reasons. The first is that Asperger and his work have been held in wide regard for many years, as evidenced by the coining of Asperger's Syndrome itself, and it is important to caveat such renown considering more recent information about him. The second is that Asperger's influence was at delayed by the awful circumstances of its writing, and thus its impact will vary from the impact of his contemporary Kanner. As this thesis is related to methodological influence, and the inheritance of ideas, it is vital that the political context of Asperger is understood.

At times Asperger has been favourably regarded in comparison to Leo Kanner for his supposed treatment of the autistic people he observed. One reason that Asperger was particularly well regarded was, in contrast to the bleaker picture painted by Kanner, Asperger believed that autistic people have great potential:

“He emphasized that the traits were lifelong, though the most able achieved success in adult life, sometimes of a high order, by finding a niche in which they could use their special interests and associated talents (Wing in Schopler et al 1998)”.

He was also said to have nurtured this potential and been relatively caring of those autistic people in his charge. Sheffer quotes Asperger, highlighting his outward beliefs about the treatment of autistic people and their potential:

“Asperger held that with proper understanding, love and guidance they could “find their place in the organism of the social community”” (p. 12) (Asperger 1944 in Sheffer 2018 p.12).

Yet recent evidence shows that Asperger was a member of the Third Reich, and his treatment of those autistic people he believed to be less than “high functioning” was abhorrent:

“Asperger, like others in the Third Reich, improvised his decision making; he could staunchly defend youths he believed might be able to join the national community, even as he transferred those he deemed on the other end of the spectrum to Spiegelgrund⁵. The linkage of help and harm renders the seemingly contradictory roles and interventions of ordinary people more intelligible, and speaks to the power of diagnosis in deciding one’s destiny in the Nazi state” (Sheffer, 2018 p.12)

Later in her book Sheffer quotes Asperger who warns that “less favorable cases” will be “grotesque and dilapidated” (Sheffer 2018 p.179). In short Asperger, while recognising strengths of his favoured autistic cases, was dismissive of those autistic people he saw as lesser. Where he has previously been recognised for his

⁵ Am Spielgrund: a Viennese clinic during World War Two in which 789 children were euthanised.

favourable treatment of those he valued, it is now known to have been offset by his crimes against those that he did not value:

“While Asperger did support children he deemed to be teachable, defending their disabilities, he was dismissive about those he believed to be more disabled.

Deprecatory pronouncements could be a death sentence in the Third Reich. And in fact, some of Asperger’s judgments were death sentences” (Sheffer 2018 p.13)

The above is stated to recognise the trauma of the past in pursuit of whatever knowledge is discussed in Asperger’s wake. While Asperger’s contribution to knowledge cannot be ignored, neither can his actions and crimes against the autistic community.

As said before, it is not focus of this thesis to outline the full details of Hans Asperger’s actions while researching autism, but those seeking to know more should read Edith Sheffer’s well researched “Asperger’s Children: The Origins of Autism in Nazi Vienna” (2018).

The present thesis is looking to create a genealogy of beliefs about communication in autism research. The majority of Sheffer’s book, beyond providing much needed context to the reader, is outside of the cope of this thesis. Yet while the present thesis starts with Kanner and Asperger, Sheffer’s work traces origins of beliefs further back than even that. Sheffer explores “how the values and events of the Third Reich shaped Asperger’s concept of autistic psychopathy. It [Sheffer’s book] examines the long lineage of the diagnosis, linking Asperger’s thoughts and action to the broader world in which he lived. To recognize Asperger within the swirl of events around him is to expose both the origins of Nazi psychiatry and the origins of Nazi mass extermination in the child euthanasia program” (Sheffer 2018 p.22).

The present thesis doesn't chase the origins of beliefs back any further than the coining of autism for two main reasons. The first of these is simply that tracing any school of thought back to its origins is both infinitely vast and, past a certain point, impossible. Every researcher, even seminal researchers, are influenced by the society they grow up in, the research that come before (either by conforming or flouting), and a myriad of other factors. It is vital to continuously acknowledge and challenge these influences both in the research of others and in the conducting of one's own research. A linguist can be aware of their Saussurean roots, without then tracing Saussure's own beliefs back to say Aristotle. In this case, the influences of fascism and eugenics that are contemporary to Asperger are of huge interest but would require a further paper. Tracing the lineage of these philosophies is way beyond the scope of this study.

The second reason to omit any discussion of influences on Asperger's thoughts are the way Asperger's work arrived in the consciousness of the English-speaking world. Information is now available that was not available when Asperger's work was translated. Therefore, the influences on Asperger were not in the consciousness of, nor were they available to, Asperger's successors. Only Asperger's work was a road map to both conscious theory and sub-conscious assumptions. Asperger's thoughts came from somewhere, but Asperger's work for a long time was the origin of thought within the field of autism.

Despite the late translation and the coming to light of the above crimes, the magnitude of Asperger's work cannot be overstated, the size of which is reflected in the coining of Asperger's Syndrome, which gained international recognition.

Hans Asperger's research methodology and conclusions differ from Kanner's in several salient ways. Here, the ways in which they differ are highlighted, and the consequences of these differences discussed. Also provided is a discussion of the ways in which these papers do not differ, which has an equally large impact on the field of autism research. The areas in which these authors agree, tend to be the areas which were not challenged within the field for a very long time. Consequently, these areas of agreement form a widely accepted basis for the overwhelming majority of all theories of autism.

Much like Kanner, Asperger bases his work of close and prolonged observation of a group of young children. These children displayed behaviours that are markedly different from others that had been observed, notably "while the schizophrenic patient seems to show progressive loss of contact, the autistic children we are discussing here lack contact from the start" (p.39). Asperger decides to use the word "autism" to label this phenomenon, a term that he takes from Bleuler's work on "autistic" thinking in schizophrenia and means a fundamental disturbance of contact (p.37-38).

Asperger's observations allow him to describe a "particularly interesting and highly recognisable type of child" (p.37). The children that he describes "all have in common a fundamental disturbance which manifests itself in their physical appearance, expressive function and, indeed, their whole behaviour"... resulting in "severe and characteristic difficulties of social integration" (ibid). Here is the central deficit that forms the basis of Asperger's autism.

2.3.2 An Overview of “Autistic Psychopathy in Children”

After a brief introduction, Asperger’s paper starts on a similar path to Kanner’s, introducing each child in the study and presenting their case notes. Like Kanner, Asperger also focuses on the child’s family background, schooling, early life behaviours, personal relationships etc. Asperger also provides details about the child’s parents, of Fritz V’s mother he writes: [t]he mother was very similar to the boy...[i]n the way she moved and spoke, indeed in her whole demeanour, she seemed strange and rather a lone...[t]he mother slouched along, hands held behind her back and apparently oblivious to the world...[o]ne could not help thinking that the mother found it difficult to cope not only with her child but with the practical matters in life... she always looked unkept, unwashed almost, and was always badly dressed” p.41. He described other parents in a similar fashion, Ernst K’s father was “highly strung and irritable”, “clearly eccentric and a loner”, and it was clear to see that Ernst K’s mother “could not have been very happy due to the husband’s difficult character” (p.61).

Asperger also described the children’s appearance at length. The specificities in Asperger’s descriptions are both extensive and highly subjective; describing one child as “grotesque”- “on top of his massive body, over the big face with flabby cheeks, was a tiny skull... his little eyes were closely set together. His glance was lost and absent but occasionally lit up with malice” (ibid).

Asperger summarises the children’s language, noting that one child sounded surprisingly clever. Asperger also notes one child’s love for reciting poetry, which links with Kanner’s findings pertaining to rote learning. Academic ability, social skills,

and behaviours (hopping, ritualistic, rocking) are also briefly included, resulting in phrases such as “autistic automaton”, “instinctively disturbed”.

Rather than continue with the assessment of each child Asperger chooses to dispense with the case-by-case details in favour of “work[ing] out the typical characteristics that all children have in common” (p.67). It is this discussion that is most of interest in the context of Asperger’s contribution to the later understanding of autism, as it is these commonalities that form the heredity basis of diagnosis of Asperger’s Syndrome and, consequently, autism.

Despite identifying these commonalities, Asperger observes that not every case exhibits every commonality, and that the research would have failed should the differences between each individual case be ignored. Asperger writes that:

“[a]utistic individuals are distinguished from each other not only by the degree of contact disturbance and the degree of intellectual ability, but also by their personality and their specialist interests, which are often outstandingly varied and original (p.67).”

Yet despite these differences “[t]he autistic personality is highly distinctive despite wide individual differences” (ibid). The common personalities traits are persistent over time, starting at the age of two. For example, a consistent commonality is “in early childhood there are difficulties in learning simple practical skills and in social adaptation” (p.68). The same commonality is seen in cases later in life where “at school age cause learning and conduct problems, in adolescence job and performance problems, and in adulthood social and martial conflicts” (ibid). It is this consistency over time that makes autism recognisable.

The other commonalities described by Asperger are:

- **Physical Appearance** – highly differentiated, finely boned features with eyes that do not engage with others and a paucity of expression (p.68).
- **Autistic Intelligence** – characterised by being totally original, and a difficulty in mechanic learning (p.75).
- **Behaviour in a Social Group** – the clearest sign of their disorder, autistic people can display “autistic acts of malice”, rhythmic rocking, and a disregard for the outside world (p.78-79).
- **Drive and Affect in the Autist** – a lack of harmony between affect and intellect. Despite high intellects, drives and instincts are often “severely disturbed”. This includes abnormality in sexuality (exceptionally high or low drive), sadistic traits, pronounced likes and dislikes, unusual relations to other and objects, poor personal hygiene and care, absence of humour, and a disharmony in emotion and disposition (p.79-84).
- **Genetic Biological Factors** – consistent features across the parents of the autistic children, including autistic peculiarities such as lack of expressive function and integration difficulties. Also, discussion of gendered contribution, autism being described as “an extreme variant of male intelligence” (p.84-87).
- **Social Value** – the final trait is speculative by Asperger; it is potential social value. Asperger predicts the contribution these children will make to society; in a small minority he sees social integration as impossible. However, in many cases he predicts excellent work performances, determination, intellectual prowess, and a narrow interest that can be valuable in some contexts.

The quick summary of the above features provides a whistle stop tour of the features that form Asperger’s autism. These are the features that categorise, diagnose, and identify the Aspergers community, and the autism community. The

following discussion will provide a critical analysis of communication philosophy in Hans Asperger's paper and discuss the consequences of his views for consequent autism research.

2.3.3 Critical Analysis of Philosophies of Communication in "Autistic Psychopathy' in Children".

Autism: Nature or Nurture

While the origin of autism is not within the scope of Asperger's work, he does, unlike Kanner, give the matter some passing thought. Yet this contribution is brief and accompanied by some contradictory observations. On the matter of autism origin, Asperger does not claim to provide any definitive writing that the paper:

"give[s] no conclusive answers at present but [will] have to refer again to future studies (p.87).

Despite not seeking to answer the question Asperger clearly favours an innate explanation of autism, perhaps one that is linked to genetic predisposition. In a similar manner to Kanner, Asperger notes the similarities between the behaviour of the children in the study and the children's parents. Asperger recognises this on a large-scale writing that:

"We want only to state briefly that over the course of ten years we have observed more than 200 children who all showed autism to a greater or lesser degree. We have been able to discern related incipient traits in parents or relatives, in every single case where it was possible for us to make a closer acquaintance" (p.84, emphasis original).

Asperger expands:

“Usually certain autistic peculiarities were present [in the parents], but often we also found the fully fledged autistic picture starting with abnormalities of expressive functions and gaucheness up to the higher level of ‘integration difficulties’” (ibid).

Asperger even says that in some cases, the heritage of the autistic child can be traced back to intellectuals who have been driven into intellectual professions by their nature. In other cases, noteworthy artistic or scholarly personalities are ancestors of the autistic children. Asperger takes this as a suggestion of “a dominant mode of inheritance” (ibid).

Asperger does not consider the sociological factors that may lead to what he sees as a suggestive pattern in the children’s ancestry. The descendants of intellectual minds, are more likely to be both intellectually capable to notice their children’s behaviours and seek help for them, as well as more likely to have the resources to do so. People from poorer families, will have had fewer means through which to reach the attention of the psychiatrists and institutions that Asperger works with. Therefore, Aspergers’ findings here may have been created by societal means, rather than being indicative of any innate autism genes. Furthermore, Asperger does not appear to consider that parental similarity in behaviour, may be because this is where the autistic child learnt their behaviour.

The second pattern that Asperger notes, that he believes to be indicative of a genetically given autism, is that of gender. Asperger observes that:

“[i]t is fascinating to note that the autistic children we have seen are almost exclusively *boys*... There is certainly a strong hint at a sex-linked or at least sex-limited mode of [autism] inheritance.” (ibid).

At this point Asperger introduces a concept that would later gain traction and become very familiar within autism discourses. Asperger introduces the conceptualisation of autism as “an extreme variant of male intelligence” (ibid). The relevance of this to identifying Asperger’s views on the origins of autism are that he believes he talks of the father “transmitting” autism. A stark contrast to the largely mother orientated and learnt behaviours of Kanner’s autism.

Again, it is entirely possible that mostly boys were brought to the attention of Asperger because of a gender biases within society. Asperger writes that he “never met a girl with the fully fledged picture of autism”⁶ (p.85). In the modern day, autistic diagnosis in females is not uncommon, yet they are less frequent than diagnosis in males.

There is a fledgling theory of a male transmitted, innate autism in Asperger’s work. The behaviours are not (at least not entirely) learnt. Here is a contrast with the pre-Chomskian beliefs of language at the time. Although Asperger does not openly subscribe to a model of communication, it can be assumed that he believes language and communication to be learnt. Therefore, autism as a syndrome must either be an innate diversion of the learning process, or an innate model of communicating that overrides standard learnt communicative practices.

Glance and Paucity of Expression in Autism

Glance and paucity of expression are two of the core characteristics of autism that Asperger identifies under “Physical Appearance and Expressive Characteristics”. Asperger remarks on other features in here, such as loss of baby features, finely

⁶ Although Asperger does note some autistic features in the mothers of autistic children (p.85).

boned features, furrowed brow etc., are subjective and of limited interest to the discussion of communicative assumptions in within Asperger's paper.

Asperger waxes that: "[i]t is not only poets who know that the soul lies in the eyes" (p.68). Asperger observes that "[f]rom the first moment when an infant can properly 'look', that is, from the third month of life, and well before there is any verbal expression, the majority of his social relations are based on eye gaze" (p.68).

However, with the autistic children he observes, there is a "fundamental difference" (ibid). With the children of Asperger's study "[h]ardly ever does their glance fix brightly on a particular object or person as a sign of lively attention and contact" (ibid). It is impossible to say from Asperger's writing, whether his observations are based on a total lack of autistic gaze attention, or whether it is the case that the autistic children were fixating on things that Asperger did not deem to be relevant. Certainly, in the modern day, account of autism from people such as Amanda Baggs, relate that their gaze is often fixed on something that is salient to them, even if it is not to others. The following quote is the only evidence that Asperger recognises some focus to autistic gaze, whether that be internal or external:

"One can never be sure whether their glance goes into the far distance or is turned inwards, just as one never knows what the children are preoccupied with at a particular moment or what is going on in their minds (p.68-69)"

The paucity of gaze is written to be most transparent when the autistic people are in conversation with others. Of this occasions Asperger writes that "[g]lance does not meet glance as it does when unity of conversational contact is established (p.69). These observations are of particular interest to this study, as Asperger is starting to paint a picture of what he believes to be a conversational norm. Establishing a

normative pattern (or order) to communication, is a step that is often lacking in autism research seeking to establish a communication disturbance (or disorder).

Asperger continues to establish what is believed to be normal about gaze in communication:

“When we talk to someone we do not only ‘answer’ with words, but we ‘answer’ with our look, our tone of voice and the whole expressive play of face and hands. A large part of social relationships is conducted through eye gaze” (p.69).

Normative gaze, therefore, includes eye contact (glance meeting glance) and attentiveness, used in conjunction with expressive play of the hands and face. In these ways, people conduct social relationships with one another. Asperger does not provide depth of analysis but accepts these based on his own experiences of interactions. Therefore, his observations about autistic disturbance in social gaze are also based upon Aspergers’ own perception of normativity, based upon his own, unique, experiences.

These observations are that autistic people are “not interested” in the social relationships conducted by gaze. Notably, Asperger writes of a lack of interest, rather than a lack of ability at this stage. Asperger supports this with the statement that “the [autistic] child does not generally bother to look at the person who is speaking (p.69). Unlike Kanner, Asperger distinguishes between lack of ability and lack of motivation when highlighting gaze as a defining feature. Asperger is not writing about children who *cannot* conduct their gaze, but children who *do not* conduct their gaze. The distinction is a small one, in that it is not continued to any great lengths in the paper, but it is another clear example of Asperger’s higher regard for the ability of the autistic individuals in his study. The essence of this is supported by his observation

that there is an exception to the paucity of gaze, “their eyes light up when they are intent upon some malicious act” (p.69). For Asperger, paucity of gaze is about choice, not ability.

Another example of the higher regard that Asperger has for the autistic children, is that he recognises their ability to perceive the world around them despite the paucity of gaze. He writes that “autistic children do not look with a firmly fixed glance at anything, but rather, seem to perceive mainly with their peripheral field of vision. Thus, it is occasionally revealed that they have perceived and processed a surprisingly large amount of the world around them” (p.69). Asperger’s observation is a slight deviation from the children described as “like in a shell” in Kanner’s paper.

Asperger’s brief description of paucity of facial and gestural expression is very similar to his description of eye gaze. Asperger describes that:

“in ordinary two-way interaction they [the autistic children] are unable to act as a proper counterpart to their opposite number, and hence they have no use for facial expression as a contact-creating device” (ibid).

There is the hint of divergence from a norm, by the characterisation of autistic people not being “proper” in “ordinary” interactions, but again there is no detailed description of what normal facial expression is and how it is normally used. Asperger describes autistic expression as:

“Sometimes they have a tense, worried look. While talking, however, their face is mostly slack and empty in line with the lost, faraway glance.”

Accepting Asperger’s observations of autistic facial expression for the sake of this discussion, there are still several assumptions made by Asperger when characterising it as a “paucity”. The first is that the “tense, worried look”, “faraway

glance”, and “slack and empty” face are not communicative representations. Autistic people may feel tense, worried, disengaged, distracted, or any other number of ways that manifest themselves in the expressions above. In which case the facial expressions are consistent, and clearly communicative. Asperger is assuming that other people feel the same way he does during interactions, that the statements that make him smile, frown, smirk, etc. will also make others feel the same, and thus display similar facial expression. Asperger’s claims of paucity of expression, are based on unfounded, unproveable assumptions about varied emotional states. The key assumption Asperger is making here is that he knows how the autistic children are feeling. Asperger’s observations can only be made on a double assumption: assuming the internal state of a person, and the assumption you can interpret their expressions. Given that the autistic people are living in a normative world, being observed by a psychiatrist, during a world war, and various other factors, they might very feel as well as look “tense” and “worried”.

Asperger continues with this discussion, and takes a small but interesting step to establishing a hierarchy for expression:

“Next in importance to eye gaze as a channel for expression is language (p.69)”

What is most salient to the linguist here, will be what Asperger includes under the umbrella term of “language”. Asperger includes what some linguists will later term paralinguistic features such as tone of voice:

“We can hear from the *tone* of voice what relationship people have to each other, for instance superior and subordinate, and whether they are in sympathy or antipathy

(p.69, emphasis added).

Language, to Asperger, goes beyond words, grammar, and sentences. Language is anything associated with the production of those words. Asperger continues to say that the interpretation of elements such as tone, occurs “regardless of the often deceptive content of the words themselves. It is this aspect of language, that tells us what someone really thinks (ibid)”. While Asperger includes tone under the umbrella of language, he clearly sees it as separate, and in some regards more valuable, than the words themselves. Asperger only touches on this briefly writing that:

“It is this aspect of language which tells us what someone really thinks. In this way the perceptive listener can get behind the mask. He can tell from an individual’s expressions what is lie and truth, what are empty words and what is genuinely meant (ibid).”

Asperger’s understanding of language seems to hinge upon some undisclosed notions of truth and deception. The spoken words, represent the deception, or the mask, which most people put forward. Meanwhile, there is some internal truth, which can be glimpsed through the paralinguistic features of gaze, tone, volume, and so forth.

Therefore, when people speak, Asperger presents a model with two layers of meaning. There is the immediate, surface level but deceptive meaning formed by words. Asperger does not provide any comment on how this level of meaning is interpreted, but it would appear to be a simple case of matching words to their literal meaning. A model that could later be described as “decoding”. Then there is the second, and apparently more complex meaning behind Asperger’s language, the meaning that must be interpreted from paralinguistic features. There is no discussion of whether this is equally encoded, such as the old folk tale that looking to the top left

means you are telling a lie, or whether it is a more complex interpretation based on knowledge of that person, the context, your own past experiences and so forth. In short, Asperger has created a model of language that includes not just words but also the way they are spoken, which allows for a dual interpretation and analysis of truth from the listener. While this is not formulated into a theory as such, and it is certainly not supported by any literature existing at the time, there is enough evidence here to see Asperger's beliefs. Furthermore, it allows this sapling model of language to be applied to the overall discussion of autism within the paper.

Asperger relates this model of language to autism, which he calls contact-creating expressive functions, by noting that they are "deficient [sic]" in the autistic population (p.70). The deficiency of these features is said to be "of particular diagnostic importance" by Asperger and while the abnormalities can differ, the presence of abnormalities is invariable (ibid). In production, autistic voices can range from "soft and far away" to "shrill and ear splitting" and several other variable Asperger identifies. Asperger concludes that:

"However many possibilities there are, they all have one thing in common: the language feels unnatural, often like a caricature... autistic language is not directed to the addressee built is often spoken as if into empty space... exactly the same of the autistic eye gaze (ibid).

In summary, Hans Asperger has created a model of expression which includes such features as eye gaze, tone, volume. These features of seen as part of the language, but of more salience in conveying true meaning than the words themselves. The autistic individual does not express, or receive, these expressive features, leading to a universal but varying abnormality in their language. Within this model, Asperger

has unacknowledged beliefs, usually based around intention and emotion, which require a level of mind reading by him as an interpreter. The model only works, if Asperger's guesses about the attention and emotion of the young autistic people are correct. Even if Asperger has (and this would be unproveable) correctly guessed the young person's state of mind, it must be challenged whether autistic attention and emotive expression are deficient as he writes. Instead, attention may be diverted to what is salient to the autistic person, rather than being totally absent, and emotive expression may well be representative of a different emotion state, rather than the prevailing one within the group.

Autistic Intelligence

While the conversation around wider autistic intelligence would be outside the scope of this communication focussed thesis, Asperger does include many features that are salient to communication, and most notably language. First, it is important to base this discussion in a wider understanding of both general intelligence and autistic intelligence according to Asperger.

On intelligence, Asperger posits that a child's skills grow from a tension between that which is spontaneous, and that which is repeated. To be of value, these two elements must be balanced:

“when original ideas are lacking achievement is an empty shell: what has been learnt is merely a mechanical copy (p.70).”

Noteworthy here are the similarities with Kanner's dismissal of rote learning, and the condemnation of repetition as “meaningless”. Both papers place a high value on originality. Yet here is where the two papers divide, because Asperger states that:

“Autistic intelligence is characterised by precisely the opposite of this problem. Autistic children *are* able to produce original ideas. Indeed, they can *only* be original, and mechanical learning is hard for them (ibid, emphasis original).”

Far from the rote lists, song lyrics, and meaningless repetition of Kanner’s autism, here Asperger’s autism is noteworthy for its originality in ideas. Autistic people are not regurgitating phrases and learning but are instead coming up with entirely unique perspectives and concepts. In fact, “[t]hey are simply not set to assimilate and learn an adult’s knowledge (ibid).”⁷

Asperger links language production to intelligence, writing that “they [autistic children], and especially the intellectually gifted among them, undoubtedly have a special creative attitude towards language”. Asperger does not note that any of the children in his study are mute like some of the children in Kanner’s study. But a discussion of the link between language production and intelligence, surrounding a non-verbal autistic child, would be very informative of Asperger’s position. Similarly, if creative language production correlates with intelligence, is echolalia a marker of unintelligence in the population? From the impoverish data in the quote above, it would suggest that Asperger believes intelligence leads to creativity in language production, and Asperger would not deem entirely non-verbal or echolalic young autistic people as part of his data pool.

Asperger continues to outline the indicators of autistic intelligence in language production:

⁷ In this duality of intelligence, Asperger reaffirms his stance that autism is not merely an impairment, but that it also has its strengths. Asperger writes that “[j]ust as...somebody’s good and bad sides are inextricably linked, so the special abilities and disabilities of autistic people are interwoven”. Once again reaffirming the divergence from the entirely deficit model of autism in Kanner’s work.

“They [autistic children] are able to express their own original experience in a linguistically original form. This is seen in the choice of unusual words which one would suppose to be totally outside the sphere of these children. It is also seen in newly formed or partially restricted expressions which can often be particularly accurate and perspicacious, but also, of course, often quite abstruse.”

Again, the persistent characteristic of originality deviates from Kanner’s autistic echolalia. The description above goes beyond originality, into the realms of being “unusual”. The observations of language beyond the “sphere” of the child supports the notion of superiority within that section of intelligence, as does the accuracy and precociousness with which they are produced.

Asperger does acknowledge that such language can be found in most young children, but that such spontaneously formed expression is only pervasive in the autistic population beyond the toddler stage. An example of this child like, but insightful language comes from a young boy of the age of six or seven, who defined the difference between stairs and ladders as:

“The ladder goes up pointedly and the stairs go up snakedly (p.71)”

A further example is the young boy who described that he could understand something but not verbalise it as “I can’t do this orally, only headily (ibid)” an instance of language production that Asperger describes as “especially rich”. Similar utterances include: “my sleep today was long but thin”, “to an art-eye, these pictures might be nice, but I don’t like them”, “I don’t like the blinding sun, nor the dark, but best I like the mottled shadow”, and “I wouldn’t like to say I’m unreligious, but I just don’t have any proof of god”. Asperger holds each of these utterances in equally high regard.

Yet there is a large amount of subjectivity in Asperger's categorisation of autistic language and intelligence. What Asperger describes as rich, introspective, original, and insightful may be seen by other researchers as reductive. Asperger's observations provide as much insight into his own linguistic preferences as they do into the young people that he is observing. Yet the insights do provide the platform for discussing researcher interpretation. Any researcher of language, whether it be of linguistic deficit or linguistic intelligence, can only do so by operating within their own understanding and experiences of language. Kanner's observations of deficit, and Asperger's observations of intelligence are two sides of the same subjective coin. Each are arriving at a conclusion based on their own experiences, own values, and own interpretations.

Nowhere is this originality more prevalent than in Asperger's analysis of a response by participant Ernst K.:

"when asked 'What is the difference between wood and glass', [Ernst K] replied 'The wood grows and gets dirty skin, it attracts the dirt from the soil, and it gets so hard that it sticks to the tree and does not go away anymore. This is how the soil fixes itself to the tree. If one drops glass, then it breaks even though it has been welded together, because the stickiness which is welded in let's go, and then it breaks'"

To this response Asperger simply writes: "[c]learly this abstruse theory is weird rather than original!"; proving that Asperger's views on originality and intelligence are entirely subjective. Similarly, interests are determined by Asperger's own views: "[s]ometimes they have crackpot interests which are of no practical use". Autistic intelligence feels like a lottery, if one adopts an interest deemed worthwhile by the researcher you are intelligent, if not, they are crackpot. There is noteworthy

ramification for the still popular concept of an autism spectrum here, with this subjectivity contributing towards the later formation of the approach. Such discussions will be held in a later chapter, but it is worth noting here due to the prevalence of Asperger's work in that conceptualisation.

Ironically, Asperger recognises the unique experiences that the autistic children are bringing to bear, while still neglecting to notice his own. He writes that:

“behind the originality of language formulations stands the originality of experience.

Autistic children have the ability to see things and vents around them from a new point of view, which often shows surprising maturity (p.71).”

The originality of language is used as evidence of intelligence. Yet there is some circularity, as Asperger never provides a definition or criterion for intelligence.

Therefore, the evidence is also the explicit working understanding within the paper.

Yet the concept of originality of experience is the most salient here. Such a concept goes beyond the work of Asperger's contemporaries in autism research, as it allows for the introduction of learned experience. Not everything, within Asperger's understanding, is a direct consequence of an innate autistic way of being, instead there is an acquired element to a person's way of communicating. The acquired element allows for the conclusion that autistic people, at least in part, communicate differently owing to their differing experiences.

Asperger has a similar approach to academic ability. He notes the “particular interests” of a few of the autistic children, including natural sciences, a chemist, poisons, numbers, and technology. There is no talk of an innate talent in these areas, instead all talent is based on a foundation of their own experiences. The more interest, presumably the more effort and time put towards the subject, and

consequently the better the person is at is. These considerations are not fully fleshed out in Asperger's paper.

Asperger also notes a skill in introspection: "[t]hey are an object of interest to themselves (p.73), but also of judgement of character: "[t]hey know who means well with them and who does not, even when he feigns differently (ibid)". There is no justification for these skills being linked to intelligence, and without a model of intelligence or communication to work towards, Asperger's reasoning can only be assumed at. Asperger deems social awareness to be some form of social intelligence.

Yet once again, there remains the question of how a strength or weakness for social intelligence must be measured. Presumably, one who is adept in social intelligence can *correctly* interpret when they are being lied to or misled. Yet how does the researcher know the answer to this question? All a researcher can do, is match whether the autistic person's interpretation of deception aligns with their own interpretation. The researcher, to label this alignment as *correct*, is working on the assumption that they themselves are socially intelligent. Alternatively, the researcher themselves has constructed deceptions upon which to test this social intelligence, in which case even more variables arise. If it was part of a game, was the autistic person just particularly adept at the game, if it was in conversation then perhaps the research is just a poor deceiver, perhaps the autistic participants were naturally wary and alert in certain conditions and so forth. Without the data upon which these observations were made, potential for further critical engagement is limited. Yet the lack of awareness of the role of the researcher is still clear. The subjective nature of many of autism's traits, means that researcher bias is unavoidable, and is prevalent in Asperger, Kanner, and their successors. Consequently, recognition of this trend

throughout the early autism papers is an essential block in understanding the formation of autism as a subject of research.

A critical description of Asperger's work on autistic intelligence and originality was provided at the start of this section. However, later in the paper is embedded a critical observation on autistic *awareness* of originality. Asperger writes that:

“these children... often have surprisingly accurate and mature observations about people in their environment... they have a particular sensitivity for the abnormalities of other children. Indeed, abnormal as they themselves may be, they are almost over-sensitive in this respect (p.73-74).

There is the potential for a contradiction here, a contradiction which Asperger recognises in his own work. If an autistic person has a characteristic deficit in their relationship with the world and other people, then how can an autistic person be so in tune with the character of others? Asperger paints a picture of an autistic social disturbance, yet with advanced autistic social insight. Or as Asperger frames the question: “[w]e want to demonstrate that an essential abnormality in autism is a disturbance of the lively relationship with the whole environment... how can one reconcile this contact disturbance with the special clear-sightedness which is implicit in the examples just described?” (p.74).

Asperger's answer to this is that the “normal child” [sic] instinctively “swims with the tide”, there is no conscious judgement. The ability to instinctively do this is due to the “normal child” having a “proper relation to the environment” (ibid).

In contrast, the autistic person has an increased personal distance, which allows them to have an “abstraction of consciousness”. The distance from the object allows for concept formation which is beyond those who are immersed in the environment.

In short, the autistic distance which causes a disturbance of relationships, also allows them to have perspective for advanced insight. There is an autistic “psychopathy clarity of vision” (ibid). Note the difference between the entirely detached and disinterested person in Kanner’s autism, and the detached but observant person in Asperger’s autism. These are exactly the types of differences that resulted in the two being separately diagnosed, with intelligence being a key factor between the two diagnoses.

The role of autistic observer is not limited to social situations, and it is these detached observations that Asperger attributes to the prevalence of autistic individuals in scientific fields (ibid). Asperger highlights that autistic traits are even a stereotype of the scientific community: “[t]he contact disturbance which gives rise to a helplessness in the matters of practical life is typical of the absent-minded professor and has made him immortal in jokes and cartoons” (ibid). However, in most cases “the positive aspects of autism do not outweigh the negative ones”, and autistic people range from “the highly original genius, through the weird eccentric who lives in a world of his own and achieves very little, down to the most severe contact-disturbed, automaton-like mentally retarded [sic] individual” (ibid). Here are the early workings of the autism spectrum, Asperger’s influence on which are the subject of a later chapter.

A critique has been levelled at Asperger so far in this review that much of the assessment of intelligence has been subjective. While Asperger does not overtly engage with this aspect of his findings, he does give a reason for not using intelligence testing. Despite the role of observer, and the keen interests which result in advanced autistic intelligence, Asperger notes that autistic children may struggle to learn in school. The guided instruction is too far impeded by the autistic

disturbance in contact. Many intelligence tests do not engage with school-based learning due to the environmental factors behind the person's intelligence. Therefore, Asperger believes these tests would give "a false picture of their intelligence" (p.76). That short statement on intelligence testing is as close as Asperger comes to justifying his methodology in observing autism and intelligence.

In summary, Asperger observes an autistic intelligence that is different from non-autistic people's. In some cases, and in some specific areas, autistic intelligence is seen as advanced. Asperger attributes this advanced intelligence to three key factors. The first is an autistic originality, which allows for fresh insight. The second is an autistic distance, which allows the autistic person to be an observer of situations rather than be embedded within them. The final factor is an autistic keenness of interest. Aspergers' observation of these factors is largely based on the subjective nature of his own conclusions, and what is deemed original and intelligent is done so from his own perspective.

Autistic Behaviour in a Social Group

In the eyes of Asperger, autistic behaviour in a social group is a derivative of the most dysfunction of autism: a disruption in forming social relationships. The way Asperger's autistic subjects act in a social group, is the clearest indicator to Asperger of this underlying autistic trait (p.77).

Asperger writes that autistic dysfunction in forming social relationships is the root of conflict throughout autistic life, and that the worst conflicts occur within the smallest social unit, family (ibid). The reason provided, is that family relationships are built on emotional bonds, and that children are strongly influenced by the interplay of these feelings between parents and children. According to Asperger, the autistic individual

does not know what to do with these feelings, “they face them with incomprehension and even rejection” (ibid). The result of this is parental suffering because of their child’s “unfeeling” behaviour.

There is a lot to unpack here. First, the usual assumptions of mind reading by the researcher, who believes that they can correctly interpretate the feelings of both the autistic child, and the parent in this scenario. Further are the normative assumptions of family workings. There is also a dual assumption on how families relate to one another. First, that all families form relationships based on the same interpersonal criterion . Second, that a deviation from these will be met with the same response from both the parents and their autistic children. Asperger’s observations here only work if the norm he establishes is accepted, and if the researcher’s interpretations of states of mind can be accepted.

The conclusion of these assumptions is to observe that most “autistic acts of malice” occur within the family setting. These acts are reported to be calculated, and “[w]ith uncanny certainty, the [autistic] children manage to do whatever is the most unpleasant or hurtful in a particular situation” (ibid). Asperger mitigates this, saying that due to their “emotionality” being “poorly developed”, the autistic person cannot sense how much they have hurt others. There are several consequences for Asperger’s model of “autistic acts of malice” on the wider issue of autistic communication.

Firstly, there is a clear contrast between the autistic person’s lack of awareness when they hurt somebody, and the autistic “psychopathy clarity of vision” (p.74). If both Asperger’s observations are taken at face value, then the autistic person’s “often have surprisingly accurate and mature observations about people in their

environment” (ibid) does not extend to recognising when they are hurt. Either that or the autistic person cannot recognise the impact of their own actions on others. Which does not correlate with any of Asperger’s claims about penchant for scientific or social observations. There is no justification for the difference between autistic capacity to recognise malice in others, but not to recognise the impact of their own behaviour on others.

Furthermore, Asperger continues to write that autistic people “[d]elight in malice” (p.77). For this to be true, autistic people must recognise that their actions are malicious. How an autistic person can recognise their own malice, without and understanding of the negative consequences of their behaviour on others, is also not discussed. It would seem impossible to recognise one’s own malice, without being able to recognise that you have hurt others. Similarly, describing autistic behaviour as “sadistic acts” (ibid), would suggest enjoying hurting others. Enjoying hurting others, is not possible if one cannot “sense how much they hurt others”.

Asperger believes the autistic child requires intellectual effort combined with elaborate rules to develop social rules (p77-78). There is a conscious effort and process of learning for the autistic child, in contrast to the non-autistic child who acquires social rules naturally through unconscious imitation of the parent (ibid). Social rules are therefore a product of the environment, not innately given. What is innate is the penchant for acquiring these skills, and this is where the autistic person’s disturbance is. There is considerable insight here to the model of communication which Asperger subconsciously adopts. This is a model of learnt behaviours, driven by an innate capacity for learning. A model which requires social input but no direct direction.

The learning process is something that Asperger returns to consistently. Unlike Kanner, Asperger notes that despite appearing to “be alone in the world” and taking “no notice of what happens around him”, the autistic child absorbs a surprising amount of what goes on.

Again, these comments are fleeting and create a tension in Asperger’s work.

Asperger does not satisfactorily marry the concepts of the autistic observer, with the failure to learn social rules. Asperger appears to flit between these concepts, and it almost feels as though Asperger is describing different people. On the one hand the autistic person who: “sits preoccupied, perhaps apart in a corner, or even in the middle of a happy noisy group of siblings or peers. He is like an alien, oblivious to the surrounding noise and movement, and inaccessible in his preoccupation” who is unable to learn the social behaviours through imitation (p.77-78). On the other hand, the “psychopathy clarity of vision” (p.74) and “abstraction of consciousness” (ibid) that has rare insight. Here, again, is the tension that Asperger himself notes. Autistic isolation and autistic observation. Social distance with social insight. Preoccupied yet aware.

Within this pre-occupation, Asperger observes stereotypical behaviours, one of which is what would now be referred to as “stimming” or “self-stimulating behaviour”. Asperger describes these behaviours as “rhythmic rocking” (p.78). Also stereotypical is “monotonous play” which is the familiar autistic ritualistic behaviour, as well as the autistic fixation of focus and preference for routine (ibid). Although most of these behaviours are not directly linked to communication. They do serve to support the autistic occupation and isolation described throughout. However, the most noteworthy section in this discussion of autistic behaviours comes from the example that Asperger gives. The example comes from a young boy looking at the specks of

fat floating on the surface of his soup: “the changing forms were alive and meaningful to him” (ibid). The young boy has contextualised this element of his environment to be meaningful to him. Therefore, any autistic inability to impute meaning is clearly called into question. The autistic individual can impute meaning, and instances in which the autistic person appears to fail to do so could merely be a matter of difference in contextualisation. The autistic person can impute meaning from various sources in their context, not just language, social cues and other elements of interpersonal communication. Any examples a researcher gives of inability to impute meaning, are merely the researcher giving primacy to the interpersonal, and failing to acknowledge the difference of primacy that the autistic individual carries. The importance of contextualisation will be discussed in the final chapter.

Drive and Affect in Autism

Again, in this section Asperger emphasis the disparity between intelligence and affect. Autistic intelligence remains intact, while drives and instincts are “severely disturbed” (p.79).

Most discussion in this area provides little insight into Asperger’s underlying assumptions of communication. However, the observation that autistic people show cruelty and malice does show the ability to recognise the emotions of others, in that they know what acts will be cruel. It also shows the capacity to note the communicative impact of their acts on others.

The notes on autistic children’s relations to objects support this thesis’ previous statement on contextualisation. Asperger speaks of “an exceptional degree of bonding to the objects and habits of the home” (p.83). The Autistic fixation on an

object the fact that object communicates something to them, and the fact that the autistic person forms a strong relationship with said object, shows that claims of total isolation and non-communication are not substantiated. The researcher just does not deem these social skills to be present when they are displayed on objects, and not on other people. One explanation for this could be that interpersonal skills between two people require experiences to align somewhat, whereas with an object they do not.

Finally, of interest within the scope of this study, is Asperger's analysis of autistic capacity for expressing emotion. The autistic child, using their mature language, can communicate differentiated emotions that non-autistic children would struggle express (p.83). For example:

“In a peculiar mixture of naivety and sophistication they give reason upon reason why they cannot stay, why they definitely have to go home today” (ibid).

Why the initial explanation here may appear to be one of advanced skills for reasoning, there is an underlying potential factor of communication. Autistic people are used to not being understood. The lack of understanding between the autistic population and others is referenced throughout Asperger's study. Whether this be due to a difference in methods of communication, or due to a difference in shared experiences, autistic people have a wealth of lived experience of being misunderstood. Therefore, the autistic person provides excessive reasoning for their actions and the way they feel. The autistic people are trying to create understanding, when their experience is of a lack of it. There could be no inherent difference between the autistic population and others here. High volumes of justification are often present when people feel that they will not be understood. The factor Asperger

observes here could be a secondary effect of autism. Autistic people interacting with other autistic people, may be more concise, and less expressive, when stating their desires and feelings. In short, this is just as likely to be a contextual factor, as it is to be an inherent autistic feature.

The Social Value of the Autistic Psychopath

The aim of this section for Asperger was to predict the social roles, and social contributions, of the autistic children in their future (p.87). Asperger is quick to highlight, that while some autistic people will find it hard to integrate into society, this is not always the case. In fact, Asperger goes as far as to say:

“this bleak expectation, however, is borne out only in a minority of cases and, in particular, almost exclusively in those people with considerable intellectual retardation in addition to autism” (p.87).

Instead, Asperger predict that for the “intellectually intact” [sic] autistic children, their future work performance can be excellent. In fact, the excellent work performance may compensate for their social disruption in terms of social integration (p.87-88). The single minded, special interest based; nature of the autistic person results in success in the work place.

Conclusion

Asperger’s main points have been summarised above and put side by side with a gentle exposition of the communicative beliefs behind his findings. The analysis of Asperger opens by noting that Asperger believes at least some of autistic communication to be innate. Asperger evidence this by noting the prevalence in boys, rather than in girls.

Later in his paper, Asperger does note that there is some social learning, but this occurs without instruction, and despite the autistic isolation. The learning here is mainly about social rules, cues, and etiquette, rather than in relation to language in general. Asperger also refers to the impact of the autistic originality of experience on the outcome of this learning process, which is progressive for the time in which Asperger was writing.

Asperger relies heavily on his own interpretations, while neglecting to acknowledge this. Often his observations rely on his own subjective interpretation, or the subjective interpretation of parents and other researchers. Thus, many of his observations about the young people in his study, are as informative about these other parties as they are about the young people.

Another consistent interpretation that Asperger fails to acknowledge within his work, is the primacy given to the interpersonal. Asperger makes claims about autistic inability to do certain things, such as contextualisation and interaction, yet does not acknowledge when the autistic person demonstrates this ability outside of the interpersonal. Asperger requires all communication skills to be demonstrated within the confines of his own personal context.

While Asperger is progressive, and sees the strengths of the autistic population, there is still an inherent model of deficit in his core argument of autistic disturbance. As demonstrated previously, whether arguing difference, deficit, disturbance, or any other case, there must be an assumption of normalcy. Asperger does little, despite a couple of attempts, to delineate what normal communication and social interaction looks like. Thus, his position of autistic disturbance is built on the sand of his

assumptions of communicative normalcy. Without a firm model of the normality, how can one build a model of abnormality?

Chapter 3: Autism as a Spectrum and the Coining of Asperger's Syndrome: Asperger, Frith, and Wing

3.1 The Autistic Spectrum and Asperger's Syndrome: Background and Influence

3.1.1 Background

A Brief History of The Autism Spectrum and Asperger's Syndrome

In the present day, “autism” is primarily followed by the word “spectrum”. The formal name of diagnosis on the DSM-5 is “Autism Spectrum Disorder” or “A.S.D.” for short. Originally, autism was named “autism” or “Kanner’s Autism”, but this has often changed to reflect seminal new research. The change in nomenclature to include “spectrum”, represents a conceptual shift away from the black-and-white, yes-or-no model of autism that was originally described by Leo Kanner. The new approach sees autism as a spectrum, upon which people display more or fewer autistic behaviours. The spectrum model allowed for the use of terms of “severity”, people can now be described as “more” or “less” autistic. It also allowed for the use of the new familiar terms of “high functioning” and “low functioning” autism.

It is no coincidence that this rise in popularity of the autism ‘spectrum’ coincides with the wider popularisation of Hans Asperger’s⁸ work. The texts predominantly responsible for the autism spectrum are Uta Frith’s translation of Hans Asperger’s inaugural paper and the 1981 study by Lorna Wing. While Wing’s work predates

⁸ NB Hans Asperger's name will appear in full form in this discussion to avoid confusion with the syndrome that is named after him.

Frith's translation, Wing references the original Asperger paper and is responsible for the propagation of the term "Asperger's Syndrome" (although the first person to use this term was the German psychologist Gerhard Bosch in his book "Infantile Autism").

Lorna Wing observed that many children did not exactly fit within the official description of Kanner's autism, yet they still displayed some of the symptoms. For example, the children may flap their hands and reverse their pronouns, but not engage in ritualistic behaviours. Similarly, the children may be extremely motivated by routine and rituals but not severely introvert. Wing also noted that these children were often going undiagnosed and consequently, were not receiving the help that they required.

Lorna Wing asked her husband, John Wing, to informally translate Hans Asperger's original paper (see Silberman p.349). Wing believed that Asperger's work better described the children who were going undiagnosed. Asperger's description was less rigid than the description provided by Kanner and allowed for the diagnosis of the individuals that did not fit with the all-or-nothing approach to autism that was already in place.

Hans Asperger's work at this point had little recognition in the English-speaking world. By adopting Hans Asperger's work, Wing introduced two critical landmarks in society's understanding of autism. Firstly, Wing popularised the idea of the autism spectrum. Secondly, adopting a term used by Bosch, Wing first introduced "Asperger's Syndrome" as a term of diagnosis. The introduction of these two terms have shifted the way that autism has been discussed ever since.

On Wing's introduction of a new diagnostic term, Steve Silberman writes that the use of "Asperger's Syndrome" (henceforth AS) was "less a strictly empirical decision on her part and more like smart marketing" (2016 p.252). There was certainly a societal need for such a move at the time. Kanner's autism had begun to attract a set of negative social stigmas. Foremost amongst these stigmas were the effects of the Refrigerator Mother Syndrome hypothesis which identified a poverty in parental care as the cause of childhood autism. The Refrigerator Mother Syndrome was a natural progression of Kanner's work following on from some of the concepts formulated in his original autism paper. When describing autism in 1943, Kanner had repeatedly observed that autistic children's family relationships were noticeably distant:

"[i]n the whole group, there are very few really warm-hearted fathers and mothers. Even some of the happiest marriages are rather cold and formal affairs" (2015 p.188-192).

Steve Silberman tells how these initial observations grew to become the hypothesis of "refrigerator mother" or "toxic parenting" (ibid). In short, it was hypothesised that autism was caused by cold and distant parenting. The social stigma of the Refrigerator Mother Syndrome cannot be overstated; not only could the stigma damage a parent's reputation, but it could also lead to the child being removed from their parents. Psychoanalyst Bruno Bettelheim even advocated for a "parentectomy". A parentectomy would see an autistic child removed from his or her parents and sent to a foster home in the hope that the foster parents would provide the affection that the birth parents had not. Nobel-prize winning ethologist, Nike Tinbergen, wrote that emotional trauma in childhood could affect a child's attachment to their mother and result in autism (1983). It wasn't until the later works of Professor Sir Michael

Rumsey that this theory was disproven, but the stigma remained for a long time afterwards (for a summary see Baron-Cohen 2008 p.15-26).

Further stigma attached to Kanner's Autism, was the association with children who had limited communicative capacity and an inability to form social skills.

Consequently, parents were reluctant to allow their child to be diagnosed, either for fear of parental criticism or because they felt that the autism label did not fit with their child.

The coining of AS allowed Wing to negotiate this reluctance towards a diagnosis. Not only did it remove the stigma of neglectful parenting, but the new label also did not evoke the problematic preconceptions that "autism" did. Parents who did not find their children to fit the insular and withdrawn stereotype of an autistic child, were more open to the label of AS. Wing explains:

"Parents without special experience tend to overlook or reject the idea of autism for their socially gauche, naïve, talkative, clumsy child, or adult, who is intensely interested in the times of tides around the coast of Great Britain, the need for the abolition of British Summer Time, or the names and relationships of all characters who have ever appeared in a television soap opera, such as Coronation Street. The suggestion that their child may have an interesting condition called Asperger's syndrome is more acceptable" (Wing in Silberman p.252).

Thus, Wing introduced AS in the year 1981. Over a decade later, in 1994, the DSM-4 was released and AS had its own independent entry and accompanying diagnostic criteria. Typically, AS was diagnosed for those who displayed behaviours akin to Kanner's autism but without the associated language delay (Beardon 2017 p.6).

While AS became a separate diagnosis, those diagnosed were still considered to be

on the “autistic spectrum”. AS is seen not as separate to autism but as a point on the autism spectrum.

Diagnosis of AS ceased in 2013, when the release of the DSM-5 introduced “Autism Spectrum Disorder” (A.S.D.) as an umbrella term incorporating both AS and Kanner’s Autism. While the diagnosis of AS ended, the term “Asperger’s Syndrome” still has a wide usage. Many people also still identify with the term Asperger’s Syndrome rather than “autism” or “A.S.D.”.

Initial Problems

The introduction of AS was not without problems. The use of Asperger’s name created controversy due to the physicians’ suspected (now proven) affiliations with the Nazi party. For this reason, Frith’s translation was originally rejected for publication (Silverman p.353).

Furthermore, Bosch, the original user of the term “Asperger’s Syndrome”, acknowledged that “[f]rom our experience, it is to be assumed that there is an intermediate realm between the two syndromes which cannot easily and clearly be ascribed to this or to that” (1970 p.130). The lines between the new diagnosis, and the old diagnosis were blurred, meaning inconsistency in diagnosis and confusion. Wing’s introduction of Asperger’s Syndrome “came under fire from Eric Schopler for adding yet another label to a field just starting to recover from the confusion between autism and schizophrenia” (Silberman p.353).

The debate over the degree of overlap between Kanner’s and Asperger’s observations was of great importance at the time. Wing clearly believed in the benefits of recognising A.S. as a separate diagnosis, and successfully managed to make it so. The degree to which Wing’s belief was born from a view that the two

conditions are fundamentally different, or from a desire to avoid the attribution of stigma and extend diagnosis remains unclear. Meanwhile, Hans Asperger remained convinced that he was describing a separate condition to Leo Kanner. Similarly, Kanner, on his rare acknowledgment of Asperger's work, agreed that his and Hans Asperger's syndromes differed. Lorna Wing appeared to reserve judgement on the matter:

“Asperger acknowledged that there were many similarities between his syndrome and Kanner's early infantile autism. Nevertheless, he considered they were different because he regarded autism as a psychotic process, and his own syndrome as a stable personality trait. Since neither psychotic process nor personality trait has been defined empirically, little more can be said about whether they can be distinguished from each other” (p.122).

Despite the confusion on this matter, Wing's work successfully transformed the face of autism. Wing had moved away from the rigidity of diagnosis associated with Kanner's Autism and had introduced the autism spectrum.⁹

The corner stone of Wing's new approach was her 1981 case series: “Asperger's Syndrome: A Clinical Account”. These case studies drew on the work of Hans Asperger in a way that had not been done before in the English-speaking world.

⁹ Wing originally used the term “Autism Continuum” but later moved towards the term “spectrum” as “continuum” was thought to suggest “an incremental gradient of severity, from least to most severe”. Wing felt that spectrum “was suggesting something more individualized, nuanced and multidimensional” (Silberman p.353).

3.2 Asperger's Syndrome: A Clinical Account

Lorna Wing was a clinical psychiatrist who conducted seminal work in the field of developmental disorders. Lorna Wing's "Asperger's Study: A Clinical Account" opens with an acknowledgement of the similarities between the conditions described in Asperger's original paper and Kanner's paper. The most immediately obvious difference is the level of renown of each paper; while Kanner's paper is widely known and extensively cited, Wing can concisely list every known paper in the English language that cites Hans Asperger's work. The literature that does refer to Hans Asperger's work mostly relates to the debate about whether Asperger's and Kanner's descriptions are of separate entities or "varieties of the same underlying abnormality" (1981 p.115).

To create a differentiation between the two descriptions, Wing provides a summary of the lesser-known Asperger paper. Notably, Wing introduces the points of diagnosis by stating:

"The following general description includes all the most typical features. But, as with any psychiatric syndrome identifiable only from a pattern of observable behaviour, there are difficulties in determining which are essential for diagnosis. Variations occur from person to person and it is rare to find, in any one case, all the details listed below" (1981, p.115)

Even before the full description of AS, Wing begins her move away from the dogmatic style of Kanner. Wing has less of a tendency to make over-arching statements about what autism is and offers no essential, core characteristics that form the definitive character of autism or AS. Instead, AS is diagnosed when the

person displays *some* of the behaviours outlined by Asperger. These behaviours are paraphrased from Wing's summary below:

- Speech occurs at normal age, but walking may be delayed
- Difficulty in using pronouns correctly but other grammar acquired
- Content of speech pedantic and often overly lengthy
- Consistent repetition of a word or phrase
- Little facial expression
- Monotonous
- Limited gestures
- Poor comprehension of gestures and facial expressions
- Impairment of two-way social interaction
- Desire to withdraw from social contact
- Lack of ability to understand and use the rules governing social behaviour
- Lack of ability to adapt their responses to fit with the needs and personality of other
- Enjoying spinning objects
- Intense attachment to certain objects
- Unhappy in unfamiliar places
- Clumsy and ill-coordinated
- Odd posture and gait
- Poor motor skills
- Excellent rote memory
- Intense interests
- Specific learning problems, affecting arithmetical skills, reading or writing

- Social and communication impairments

(Wing 1981, p.115-117)

These behaviours do not operate on a tick sheet basis, where the person must display all characteristics to be diagnosed. Nor is there a formula for displaying x number of behaviours to reach the threshold of diagnosis. Nor is there a requirement for the extent behaviours need to be displayed or effect a person's life. Instead, the function of these behaviours in diagnosis, is vague. Just as the behaviour descriptors themselves are vague.

Wing does not totally align with the original description by Hans Asperger and does offer some modifications to his account of the syndrome. Wing adds some new features to the list of diagnostic features summarised above. These features include:

- Lack of normal interest and pleasure in human company during the first year of life
- Limited babbling early in life (limited in both quantity and quality)
- Parents finding it difficult to create joint attention at an early age
- Lack of the urge to communicate
- Limited pretend play
- Limited themes for pretend play that does occur

(p.117-118)

Furthermore, Wing provides no account of the potential relation between her newly observed features of AS and the features that were originally observed by Hans Asperger. For example, Wing observes the lack of pretend play between autistic

children and other children, but does not consider the possibility that the lack of pretend play may be a result of impaired two-way interaction rather than a direct result of AS. Similarly, Wing observes that when autistic children do pretend play, it is only within a limited number of themes, but Wing does not equate this to Hans Asperger's observations of intense interests. These are just two examples, but many of Wing's additions to Hans Asperger's accounts are arguably secondary to the original observations. Rather than describing new characteristics of AS, Wing, arguably, is describing effects of characteristics. It is the equivalent of taking a football coach's comments that his team has no proficient strikers and adding the observation that the team struggles to score goals. Rather than offering an additional observation, what is being added is more akin to a marker of the original observation.

Rather than being a critique specific to Wing, the limited efforts to note correlations between observations runs throughout autism research. The above observations of Wing can be levelled at Asperger himself, who fails to note patterns between the behaviours he describes. Certainly, the argument can be made that researchers are just covering all bases, and for diagnostic criteria to be thorough all markers need to be covered. A football team can contain a proficient striker, yet still fail to score goals, and the lack of goals is a marker that something else is happening. Yet to observe the relations between different diagnostic criteria, to note the dependence of some criterion on others is to deepen the understanding of autism. To know that some diagnostic criterion are born from the lived experience of other diagnostic criterion, is to begin to acknowledge the individual's experience of autism in society. There will be more on this in later chapters.

While Wing obviously admires and adopts much of Hans Asperger's work, but there are two areas upon which the researchers disagree. Firstly, Wing and Hans Asperger differ on developmental markers of autism. Hans Asperger's works states that "speech develops before walking" (p.117). In contrast, in Wing's own observation, it is observed that "slightly less than half of the present author's more typical cases of Asperger 's syndrome were walking at the usual age, but were slow to talk. Half talked normally but were slow to walk, and one both walked and talked at the expected times" (ibid).

Secondly, Asperger "refers to 'an especially intimate relationship with language' and 'highly sophisticated linguistic skills' (ibid) while Wing observes that "[d]espite the eventual good use of grammar and a large vocabulary, careful observation over a long enough period discloses that the content of speech is impoverished and much of it is copied inappropriately from other people or books. The language used gives the impression of being learned by rote" (ibid). Notably, Wing's observation remains more in line with the mainstream thought of the time, and the work of Leo Kanner. Wing's claims that learning language by rote is contradictory to Hans Asperger's claims of "highly sophisticated linguistic skills" displays Wing's underlying assumption that language must be an original and creative process for it to be considered sophisticated. Additionally, Wing also must assume that autistic people using language in this way does not qualify as original and creative. Autistic people are merely directly reusing language that they have encountered in the past.

To further support her rebuttal of Hans Asperger's claims that autistic people are gifted with highly sophisticated language, Wing cites her observations that "[t]he meanings of long and obscure words may be known, but not those of words used

every day.” (ibid). It is unclear how this observation fits with Wing’s claims that autistic language is learned by rote.

Wing does not provide a discussion of why this may be, nor does Wing attempt to match this observation with any others. The lack of explanation, and accompanying argument, is problematic. The evidence for Wing’s observation comes from the young person named “Case 5”. Of Case 5 Wing writes:

“He knew many unusual or technical words, such as ‘aeronautical’ and ‘pterodactyl’ but would be puzzled by familiar ones such as ‘yesterday’” (p.128).

Wing provides limited supporting evidence, so only a rough attempt can be made to explain Wing’s observations. The long and obscure words in question have a more rigid, specialist definition, while the everyday word (yesterday) is deixis. So, while the jargon words appear more complex there is certainly a case that they are more rigid in their meaning. While the everyday word in this case can be used in various ways depending on the situation, and the meaning can change relative to the position of the person. Yesterday today, means something different to yesterday tomorrow. Of course, this is just speculation at the difficulties Case 5 was experiencing, and there is insufficient data to support this. Yet this would explain why the everyday words, while more frequently used, are harder to learn by rote.

What is most salient is the lack of discussion from Wing. The trend of surface level assumptions, supported by little discussion or linguistic theory is prevalent throughout autism research and Wing is no exception. The assumptions about communication have played their role in generations of autism research and become embedded in both autism theory and the diagnostic criteria.

3.2.1 Wing and Autistic Originality

Secondly, Wing rejects the notion posited by Hans Asperger that autistic people are “capable of originality and creativity in their chosen field” (p.118). Wing instead posits that “[i]t would be more true to say that their thought processes are confined to a narrow, pedantic, literal, but logical, chain of reasoning.”. Wing does not view the autistic person as capable of providing rare insight. Instead, Wing sees the originality of thought is confined to the logical, with little or no scope of originality. Wing provides an account of how this takes place:

“The unusual quality of their approach arises from the tendency to select, as the starting point for the logical chain, some aspect of a subject that would be unlikely to occur to a normal person who has absorbed the attitudes current to his culture. Usually the result is inappropriate, but once in a while it gives new insight into a problem.” (ibid)

Wing’s distinction between being capable of originality and being inherently original is somewhat vague. It is at least partially associated with the result. While Asperger describes intelligent people addressing situations in new and original ways, Wing sees people who have original but often inappropriate world views, that only rarely provide any actual insight. Such, Asperger is describing an originality of insight that can be used as a tool for the individual, whereas Wing is describing an originality that filters a person’s entire world view. In this way Wing challenges the autistic intelligence described by Kanner, saying that he did not provide tests result to support this and that autistic people’s “special abilities are based main yon rote memory, while comprehension of the underlying meaning is poor. Those with the syndrome are conspicuously lacking in common sense” (ibid).

Wing evidences no engagement with any philosophy of originality or creativity, whether formalised or otherwise. The thought is apparently entirely rooted in her own personal judgements.

3.2.2 Wing and Autistic Language Development

Wing's first description of AS, took Hans Asperger's original observations and applies these amendments of her own. Wing accepted Hans Asperger's premise that the characteristics of AS had to be stable throughout childhood, adolescence and at least early adulthood, adding that the diagnosis of AS is only awarded when "[t]he major characteristics appear to be impervious to the effects of environment or education" (p.118).¹⁰ The exception to this rule is the development of skills that are brought on by maturation (ibid); these skills are limited to special skills within a chosen field, most notably mathematics and science. There is no insight in Wing's work about the development of social and creative skills with maturation. Perhaps this would create a paradox, if the person diagnosed with AS develops skills that aid their communication as they mature, then their characteristics are no longer stable, and they no longer can be diagnosed with AS. Thus, the focus is explicitly on the skills deemed not to aid their maturation.¹¹

With so many features of AS pertaining to communication, language and social skills, the idea that the course of AS is not perturbed by external factors lends itself closely to an internal and innate development schedule of autistic language development. Wing does not see language as forming in response to the

¹⁰ The apparent immunity of AS to the environment and education is one of the many reasons that A.B.A. is based in Kanner's description of autism and not in Asperger's or Wing's descriptions.

¹¹ Noteworthy that for mathematical ability to advance, sometimes to "especially high levels", but for communicative ability to remain stable, maths cannot be a form of communication.

environment with external stimuli, or experience. Nor are they from a conscious effort at “education”. Autistic people do not acquire their language, but merely develop it. Thus, the development must occur along a self-contained pathway, Wing’s work does suggest the possibility of this being an idiosyncratic pathway, but it appears to be a pre-programmed pathway none the less.

Owing to the lack of direct engagement with communication research it is not possible to state the influences on Wing’s philosophy of innate communication. Wing’s comments undoubtedly take a counter position to the contemporary behaviourist scholarship. Yet it is not possible to state whether Wing disagrees with the entire behaviourist language acquisition theory, or whether Wing views autism as an exception to the theory. It can be read that AS to Wing, is a biological underpinning that results in language being fixed by a natural predisposition. Alternatively, Wing could see all language as being somewhat predetermined and innate. In which case, although there is no reference to the works of Noam Chomsky¹², there is the possibility of a thematic link between the two.

3.2.3 Autism and Psychiatric Illness

Using the criteria laid out above to identify participants, Wing conducted her own clinical study of AS. By Wing’s own admission the identification of suitable participants was limited due to the selected participants all having had to have been referred to Wing’s clinic prior to the study. Therefore, participants had to have “had problems of adjustment or superimposed psychiatric illness severe enough to necessitate referral to psychiatric ward” (ibid).

¹² More on Noam Chomsky to be seen in the Chapter 4.

On the matter of intelligence, Wing accepts Bosch's explanation that some people with AS can display all the characteristics but not have normal or high intelligence (1962 in Wing p.118). The stereotype of an autistic savant does not apply. Of Wing's case studies, 20% display below average intelligence, Wing writes that "[i]f these [cases] are accepted as belonging to the same diagnostic category, then Asperger's rather hopeful view of the prognosis has to be modified to take such cases into account" (p.118).

There is also a theme of mental health problems in Wing's participants which Wing acknowledges to have impacted her observations. Of her participants many are diagnosable with anxiety and depression which "seems to be related to a painful awareness of handicap and difference from other people" (ibid). Wing had 18 participants who were aged 16 and above, of these:

- 4 had an affective illness
- 4 had become increasingly odd and withdrawn with probable underlying depression
- 1 had a psychosis with delusions and hallucinations that could not be classified
- 1 had previously had an episode of catatonic stupor
- 1 had bizarre behaviour and an unconfirmed schizophrenia diagnosis
- 2 had bizarre behaviour but no diagnosable psychiatric illnesses
- 2 had attempted suicide
- 1 had talked of attempted suicide

The statistics led to Wing's cagey analysis that "it appears that the risk of psychiatric illness in Asperger's syndrome is high, [but] it is difficult to draw firm conclusions

because of the nature of the samples that were studied". These young people had been "referred to adult services because of superimposed psychiatric conditions" (ibid). While Wing notes the biases in the study when discussing a correlation between mental health and autism, there is an absence of consideration for the lived experience of the autistic individual. Wing does not discuss the possibility that mental health may be affected by the social difficulties of being autistic in a non-autistic society. Instead, Wing merely discusses mental health and autism being two interlinked "psychiatric illnesses [sic]" (p.119).

3.2.4 Differential Diagnosis and the Autism Spectrum

Wing then continues to briefly make two seminal steps in the field of autism. The first is to introduce "differential diagnosis" to autism. Wing takes a step towards the concept that diagnosis is not just a "yes or no" tick box of autistic traits. Instead, autistic traits can be displayed with varying degrees of severity within everyone, whether autistic or not. Consequently, there will be those individuals who display autistic behaviours more intensely or frequently than others:

"As with any condition identifiable only from a pattern of abnormal behaviour, each element of which can occur in varying degrees of severity, it is possible to find people on the borderlines of Asperger's syndrome in whom diagnosis is particularly difficult" (p.120)

Wing introduces here what has become a familiar and even unequivocal sentiment today, presenting autism as not something that you merely are or are not but as something that is far more fluid and much less fixed. You can be more autistic, less autistic, mildly autistic or severely autistic, a little autistic or very autistic. In short, autism is a spectrum, or continuum as Wing first puts it.

The importance of this observation cannot be overstated. The autism *spectrum* is now embedded in society's understanding of autism, as is by far the predominant model of autism used. The nomenclature of "autism", or "Kanner's autism", has now been set aside in favour of Autism Spectrum Disorder (A.S.D.). Education systems function on concepts of autism severity and AS existed as a point on the autism spectrum. Wing's popularisation of autism as a spectrum transformed the face of autism research, diagnosis and intervention. One of the major effects of this shift towards a spectrum, coupled with the new terminology of AS was to allow the diagnosis of many individuals who would have gone otherwise undiagnosed. Autism was no longer a label for the severely withdrawn but for a myriad of people all with varying degrees of autistic traits as described.

3.2.5 Wing and Autistic Traits in the Wider Population

The autism spectrum also allowed Wing to introduce a further concept that is familiar in the modern day, that 'everybody is a little bit autistic'" While Wing doesn't use these exact words, these are the words that are familiar in lay, academic, and institutional understandings of autism today. But Wing pioneered this concept.

Wing's exact words were that "[a]ll the features that characterize Asperger's syndrome can be found in varying degrees in the normal [sic] population" (p.120).

Wing summarises Asperger's observation from 1979 that "the capacity to withdraw into an inner world of one's own special interests is available in a greater or lesser measure to all human beings. He emphasized that this ability has to be present to a marked extent in those who are creative artists or scientists." (1981 p.120). In addition to this, Wing supports her claim of universal potential for autistic traits by writing that the "normal [sic]" population has a varying degree of skill in social

interactions and reading non-verbal social cues from others. Wing also notes that special interests are not uncommon, with socially acceptable special interests including the collection of stamps or railway engine numbers or glass bottles (ibid). In speech, the “normal” population can also display pedantry, excessive tendency to be literal and excellent rote memory, all of which are associated with autism.

According to Wing the difference between people who possess these traits, and people who are autistic, is apparently the ability to set aside, or temporarily distance themselves from this trait. People who are less socially skilled, can still take part in two-way interaction. People who possess “a complex inner world” can still leave this inner world and re-join the wider world. Allegedly, this is not the case with the autistic population:

“The difference between someone with Asperger's syndrome and the normal person who has a complex inner world is that the latter does take part appropriately in two-way social interaction at times, while the former does not. Also, the normal person, however elaborate his inner world, is influenced by his social experiences, whereas the person with Asperger's syndrome seems cut off from the effects of outside contacts.” (ibid)

It is the influence from the outside world that determines autism. While anybody can demonstrate autistic traits, it is their ability to be influenced by the outside world, and their ability to interact with others that means that they are not autistic. Wing highlights that many adults have varying degrees of social skills and special interests such as stamp collecting, good rote memories, pedantic speech and so on, yet that does not make these people autistic (p.120). Yet it is only in theirs “at the extreme end of the normal continuum”, where these traits are such that it “affects their whole

functioning” that autism is diagnosed. Wing, in line with the individualised model upon which her view of autism is built, never considers that the affect she describes could be rooted in societal beliefs. Wing acknowledges that stamp collecting is deemed a “socially acceptable” pastime, never once noting that this social acceptance is what allows the stamp collector to not be seen as totally immersed in their own world. Society allows for philatelists; thus they do not have to be withdrawn. The isolation, and withdrawal into the world of special interests can be attributed to society, and not the individual. Thus, the thing that sets AS apart from non-AS on Wing’s spectrum, is arguably a factor external to the person being diagnosed.

3.3 A Brief Discussion of Wing’s Critiques in Contemporary Work

One response to the claim that everybody is a bit autistic in consequent works is the neurotype approach. The neurotype approach sees the autistic brain as fundamentally different from the non-autistic brain. Luke Beardon is an advocate for such an approach and in response to the statement “we’re all a bit autistic”, Beardon writes “no we are not” (2017 p.13). Beardon views autism with regards to neurotypes, and one can only be a single neurotype. “One cannot be both autistic and non-autistic at the same time” (ibid). The neurotype approach is talking about something fundamentally different from the behavioural based arguments of Wing. It is talking about an innate neurological difference. Yet as Beardon says:

“Certainly both populations will share similar ‘traits’ or characteristics – but so what? Making the immense, erroneous leap between acknowledging that both populations share the same ‘trait’ and subsequently assuming it means they share the same neurology is baffling in the extreme... though they share all sorts of behavioural traits

there is a clear difference between the autistic brain and the predominant neurotype". (p.14)

Despite Beardon's critique, in many ways looking at neurological differences is largely limited by looking at behaviours. The evidence for neurological differences is still rooted in the behaviours of the individual. These behaviours must still be observed, described, and classified by a researcher. It is these acts of description and classification that form the description of autism, the opinion of the researcher is still at the heart of the autism description. If the autistic person and the non-autistic person "share all sorts of behavioural traits" then what is the clear distinction between the two regarding social beings interacting with each other?

Wing recognises that some of the traits labelled as "autistic" also appear in other disorders such as schizoid personality, schizophrenia and other psychotic syndromes (p.121-122). In such cases there are two diagnostic options: diagnose as one syndrome or the other based upon the collection of behaviours being displayed or perform a double diagnosis. A double diagnosis would couple autism with another learning disability. During the period of the DSM-4, the double diagnosis route would come to use the word autism while singular diagnosis would use Asperger's.

In addition to co-morbidity, two other things separated the diagnosis of autism and AS on the DSM-4. In AS, IQ must be average or above and there must be no language delay. Conversely, autism could be diagnosed of a person with any IQ rating but there must be a language delay (Baron-Cohen, 2008 p.13). However, in Wing's first description, there is more than just a language delay that separates the communicational behaviours of the two types:

“[T]he autistic child, at least when young, is aloof and indifferent to others, whereas the child with Asperger's syndrome is passive or makes inappropriate one-sided approaches. The former is mute or has delayed and abnormal speech, whereas the latter learns to speak with good grammar and vocabulary (though he may, when young, reverse pronouns), but the content of his speech is inappropriate for the social context and he has problems with understanding complex meanings. Nonverbal communication is severely impaired in both conditions. In autism, in the early years, there may be no use of gesture to communicate.” (p.122)

For Wing, AS and autism have more differences in language and communication than just a language delay. One of the cornerstones of Wing's description is the notion of severity. Wing states this overtly, although acknowledges that others may disagree; “the variations [between autism and AS] could be explained on the basis of the severity of the impairments, though the authors above (Van Krevelen, Wollff and Barlow) would disagree” (bracketed information added, Wing 1981 p.122). Despite acknowledging the limitations, the reader will recognise the importance of severity in Wing's formation of the spectrum. Wing alludes to how severity may manifest itself throughout her discussion of the two syndromes. For example, whereas non-verbal communication is impaired in both conditions, only in autism may there be a total absence of communicative gesture. Wing presents an impairment and absence of non-verbal communication as two points on a spectrum, whereas being mute and speaking with good grammar and vocabulary are presented as two separate entities.

Wing also observes a difference in manner (autism leads to aloof and indifferent behaviour, whereas AS leads to one-sided and inappropriate behaviour) and a difference in enduring grammatical and lexical ability (as opposed to a delay which suggests any difference in ability is temporary). Many of these differences appear to

be subtle in definition, and the exact nature of the difference is not fully formed. Wing is imprecise in her characterisation and description of autistic demeanour. The role of context again is not considered. An aloof and indifferent individual could easily be one-sided and inappropriate in another context. Wing is seeing these characteristic sets of enduring and constant, a person who is aloof is always aloof. Instead, this aloofness can be seen as an act, or temporary state. Somebody may be aloof in a context which they are not comfortable, or when interacting with strangers. The same person may see their inhibitions lowered with friends in more suitable contexts and this can lead to inappropriate behaviours. Furthermore, all these manner profiles are entirely subjective. Possibly these points are the reason the differences were discarded in the DSM-4 and the focus shifted solely to the language delay.

3.4 Concluding Thoughts on Wing's Paper

The success of Wing's paper is well documented. Both AS and the autistic spectrum are now familiar in research and society, and both owe much of their origins to Wing's seminal work. In addition to the positive changes Wing brought, including the capacity for wider diagnosis and challenging of stigmas, there must be some acknowledgement of the less positive impacts of this work. Most prominently, the role Wing plays in the creation and perpetuation of certain assumptions about autism, communication and the relationship between the two must be exposed.

The most well-known of these assumptions is that everybody displays autistic behaviours. The premise is still widely accepted and perpetuated despite the work of such scholars as Beardon that are contributing to a trend of challenging it. Hand in hand with the assumption of everybody being autistic is Wing's notion of an autism spectrum. The impact of Wing introducing these assumptions, is such that it

permeates most consequent research. Therefore, this issue will be repeatedly taken up from a critical standpoint throughout later chapters.

The core message of this analysis has been to highlight that all of Wing's work hinges on the concept of normality. Autism and AS are measured in relation to a normality that is never described. While normality itself is presented as being on a spectrum, the criterion for placement on this spectrum are all but absent. In the context of autism, the concept of normality, and consequently abnormality rests on the shoulders of communicative behaviour. A more detailed descriptor of this will be provided later.

Chapter 4: Analysis of Lovaas and Applied Behaviour

Analysis

“You see, you start pretty much from scratch when you work with an autistic child. You have a person in the physical sense... but they are not people in the psychological sense. One way to look at the job of helping autistic kids is to see it as a matter of constructing a person. You have the raw materials, but you have to build the person.” (Lovaas in Silberman, p.285).

4.1 Background and History of Applied Behaviour Analysis

Applied Behaviours Analysis is not a practice that is entirely reserved for the treatment of autism. It was born from initial research on instructional control and teaching language to children with communication delays. It wasn't until the 1960s that A.B.A.'s interest turned to autism, largely due to Ole Ivar Lovaas.

Lovaas began his work on communication delays and was soon led to a clinic for autistic children where he met autistic child Beth (Smith and Eikeseth 2010 p.375). Over a sustained period of intensive work with Beth, Lovaas began to trial his motivated learning approach to curing autism.

Lovaas' work set the stage for A.B.A. to become the popular treatment that it is today. A.B.A. therapists claimed that today 45% of autism therapies that develop long-lasting and observable results are cases of A.B.A. These claims of success have placed A.B.A. in high demand, and it has grown into a large business.

Applied Behaviour Analysis (A.B.A.) holds a slightly different position than the other areas of research in this review. The other areas of research have primarily focussed

on formulating a description of autism and its core characteristics but remain theoretical in nature. In contrast, A.B.A. is a body of research that is primarily known for the practice of intervening with autistic behaviour.

Nevertheless, A.B.A.'s popularity has given it such standing that it cannot be omitted from this review. A.B.A. is based on, and perpetuates, theoretical principles that shape society's understanding of autism as much as any theoretical paper.

A.B.A. is rooted in the fundamental behaviourist principle of motivated learning and believes that positive and, sometimes, negative reinforcement can be "applied systemically to improve socially significant behaviour" (Cooper et al 2007 p.20).

A.B.A. is theoretically rooted in B.F. Skinner's behaviourism and operant conditioning. Skinner's behaviourism originated in behavioural studies of rats. Skinner noted that when presented with a box that dispensed food when a lever was pressed, a rat would learn to press the lever. When the box was changed to not dispense the food or to harm the rat, the rat would then stop pressing the lever. Skinner theorised that reinforcement is the driving principle of learning. When a behaviour¹³ is reinforced by a positive outcome (or the removal of a negative outcome) the behaviour will become stronger. Conversely, when a behaviour is punished with an adverse outcome that decreases the behaviour that follows. When a behaviour is decreased to the point that it ceases entirely, this is known as extinction.

¹³ NB the term "behaviour" is used in behaviourism to primarily mean observable behaviour while in the context of A.B.A. it is used to mean "anything that a person does", this definition differs from earlier definitions as it allows "behaviour" to include unobservable and non-public behaviour such as thought and feelings. Leigland (1992) offers the definition of behaviour as "anything a dead man cannot do".

A.B.A. draws on these principles of operant conditioning to create a framework for the modification of targeted behaviour. A.B.A. identifies socially significant behaviours and then applies the principles of positive and negative reinforcement to increase or reduce the behaviours as desired. In Smith and Eikeseth's account of Lovaas' career, it is stated that "Lovaas always emphasises positive reinforcement" but did resort to contingent aversive practices (punishment) including low doses of electric shock (in the 1960s) and slaps on the thigh (in the 1970s and 1980s) (p.2010 p.376). The justification for these aversive interventions was that they were only used to modify "the most horrifying behaviour[s]" such as self-harm and aggression and that the use of aversive interventions proved effective in the reduction or extinction of these behaviours. Later in his career, 1980, Lovaas felt that non-aversive interventions had become so efficient that aversive interventions were no longer necessary. While Lovaas himself stopped using them, Smith and Eikeseth do observe that his espousal of aversive interventions remains a controversial part of his legacy to this day (p.377).

Lovaas was a big advocate for behaviour modification in autism treatment after his seminal finding that autistic children do acknowledge consequences. However, by 1973 Lovaas observed that most autistic children reverted to their pre-intervention behaviour once they left the institute. These findings prompted Lovaas to abandon the concept of institutions as effective places of treatment and to begin the initiation of home-based interventions.

The change of setting from an institute to home, also allowed Lovaas to begin to implement more immersive treatment. The treatment no longer had to stop once the child left the institutional setting and could be maintained throughout most of the day.

These two radical changes created the first attempts at immersive behavioural modification which became the earliest form of Applied Behavioural Analysis in autism treatment. The research and findings of this radical new approach are documented in Lovaas' flagship paper from 1987, contribution cannot be overlooked and Lovaas's work has placed him as the most central figure in A.B.A. Lovaas' 1987 work "Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children".

4.2 Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children

"Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children" is often used as a reference point for evidence of the effectiveness of A.B.A. It was written by Ole Ivar Lovaas, a clinical psychologist at the University of California. The evidence comes from an extended observation of autistic children, over sustained period, who were exposed to different applications of behaviour modification. The group that was exposed to Lovaas' experimental form of modification proved to show most "progress" by Lovaas' markers of success. The full paper is detailed below, with salient points explained for the later discussion of this paper's perception of communication.

Lovaas adopts a continuation of Kanner's perspective of autism, although he does offer his own work with Koegel, Simmons and Long (1973) as a more complete behavioural definition. While Lovaas may have extended Kanner's work, their understanding of autism was clearly bequeathed by Kanner and not by Asperger, whose work was not translated and popularised by this point. Consequently, autistic children are portrayed as those who exhibit the Kanner described qualities of a

failure to develop relationships, possessing difficulties developing normal language, displaying ritualistic and obsessive behaviours, all while maintaining the potential for normal intelligence. However, the primary criterion for the conceptualisation of autism in Lovaas' work is to contrast autism with concepts of "normal" and "normal functioning". Normal functioning to Lovaas is "used to describe children who successfully passed normal first grade and achieved an average IQ on the WISC-R test".

Regarding behaviour modification and autism, Lovaas acknowledged the relative success of previous studies that had increased complex behaviours such as language and suppressed pathological behaviours such as aggression. However, these initial successes were limited, and the improvements were both context-bound and prone to relapse after a period.

Despite these previous flaws Lovaas still placed faith in behaviour modification but to progress, two interlinked questions needed to be answered. Firstly, why were autistic children not responding as well to behaviour modification as other subjects had; and second how can behaviour modification be changed to circumvent the pitfalls.

Lovaas' answer to the first question was that autistic people had to be somehow deficient. Autism was almost exclusively viewed as a disability or deficiency at the time, Lovaas just had to provide a description how this disability effected autistic people undergoing behavioural modification:

"One may assume that normal children learn from their everyday environments most of their waking hours. Autistic children, conversely, do not learn from similar environments."

Lovaas accepts this definition, without any thought for what quantifies an “everyday environment”. There is a false logic here, which assumes that the everyday environment is consistent across the experiences of all the children. There is no room for the unique experiences of each child.

However, now that Lovaas had a clear description of why autism does not have sustainable results from behaviour modification he needed to adapt his approach to compensate for the autistic deficiency:

“We hypothesized that construction of a special, intense, and comprehensive learning environment for very young autistic children would allow some of them to catch up with their normal peers by first grade”.

It is with this proposal of an immersive, non-institutionalised version of behavioural modification that Lovaas aims to overcome the limitations of previous studies. The new treatment sought to maximize behavioural treatment gains by treating children during most of their waking hours for many years. Lovaas’ treatment was radical by not merely consisting of a practitioner and an autistic child in an institute but “included all significant persons in all significant environments”.

The treatment would be conducted on autistic children from a very young age as “it was assumed that younger children would be less likely to discriminate between environments and therefore more likely to generalize and to maintain their treatment gains”. Thus, more likely to escape the context-bound, short lived results of previous studies. There were three main criterion for the selection of participating autistic youngsters:

The participants had to be young. Less than 40 months if mute and less than 46 months if echolalic¹⁴.

The participants had to be diagnosed autistic from at least one, but often two, independent practitioners.

The participants had to have a prorated mental age of 11 months or more by the time they reached a chronological age of 30 months.

As this was a long study, the diagnosis element of these criteria changed in line with the evolution of the DSM (Diagnostic and Statistical Manual of Mental Disorders). Meanwhile, the mental age criterion excluded 15% of referrals who were in the “retarded” [sic] range of intellect.

With participants selected, Lovaas assigned them to two groups, both of 19 subjects. The two groups were labelled “Intensive-Treatment Experimental Group” and “Control Group 1”. The Intensive-Treatment group received more than 40 hours of one-to-one treatment per week. The control group received 10 hour or less of standard one-to-one behavioural moderation treatment per week. All treatment was sustained for a period of 2 years (p.4).

While the treatment of the control groups aligned with the previously trailed versions of behavioural modification, Lovaas’ experimental group had a progressive method of treatment:

“The conceptual basis of the treatment was reinforced (operant) theory, treatment relied heavily on discrimination-learning data and methods. Various behavioral deficiencies were targeted, and separate programs were designed to accelerate

¹⁴ Implying an abnormality in communication being central to autism after all.

development for each behavior. High rates of aggressive and self-stimulatory behaviors were reduced by being ignored; by the use of time-out; by the shaping of alternate, more socially acceptable forms of behavior; and (as a last resort) by the delivery of a loud “no” or a slap on the thigh contingent upon the presence of the undesirable behavior. Contingent physical aversives were not used in the control group because inadequate staffing in that group did not allow for adequate teaching of alternate, socially appropriate behaviors.”

The treatment was designed in line with Lovaas’ hypothesis and was planned to grow to cover “all waking hours, 365 days a year”. While still based on the same behaviourist principles as the control groups treatment, the sheer scale of Lovaas’ experimental treatment was designed to have radically improved and sustainable results. This was facilitated by have all parents “extensively trained in the treatment procedures” to ensure they continued the round the clock exposure (p.5). Class teachers were also enrolled to help conduct the treatment program (ibid).

Questions of how Lovaas ensured consistency within the study must be asked. How can the researchers know parents and teachers adhered to their training, did not have days where they neglected it, days where the subjects stayed with grandparents or any of any number of other variables? It seems unlike that this was possible without constant supervision, which was clearly lacking, hence why parents and teachers needed to be trained rather than just having around the clock researcher with the young person.

The experimental treatment broken was down into yearly, goal-orientated stages by Lovaas:

1st year goals: reduce stimming, reduce aggressive behaviour, build compliance with elementary verbal requests, teach imitation, establish beginnings of appropriate toy play, promote extension of treatment into the family

2nd year goals: emphasise teaching expressive and early abstract language and interactive play with peers. Extend treatment into the community – teach child to function in preschool group.

3rd years goals – emphasise teaching of appropriate and varied expression of emotions, reading, writing, arithmetic, observational learning (learning from observing other children learn) – teachers carry out the program.

No rationale for these treatment goals was provided. A discussion, especially of the linguistic markers, would have provided insight into Lovaas' belief about language learning and normative linguistic milestone.

To attain the success of this new form of treatment Lovaas needed a measurable outcome. Pre-experiment and post-experiment data was collected, including an assessment of mental age, gathered from four different test, behavioural observation from videotapes of the child in a playroom and a one-hour interview with parents.

The behavioural observation was collated and recorded as quantitative data, scoring on self-stimulatory behaviour, appropriate behaviours, and recognisable words.

Likewise, the interviews with parents were quantitatively collected scoring for prevalence of recognizable words, toy play, emotional attachment, applied sensory deficit, peer play, self-stimulatory behaviour, tantrums & toilet training. Participants were also scored on abnormal speech, age of walking, number of siblings, socioeconomic status of the father, sex and neurological examinations. Abnormal speech was scored with 0 = normal and meaningful language, however limited; 1 =

echolalic language used meaningfully [e.g., to express needs]; 2 = echolalia; and 3 = mute). Finally, chronological age was recorded before and after treatment resulting in 20 pre-treatment measures recorded here but with no qualitative data. Again, no rationale is provided for these social and sociological markers, depriving further insight into Lovaas' underlying subscription to communication philosophies.

Prior to the treatment, the data appeared typical of what Lovaas expected from a sample of autistic children. The data showed several salient trends to Lovaas:

Intellectual Functioning: 2 of the 19 subjects obtained scores within the normal range of intellectual functioning, 7 scored as “moderately retarded”, 10 scored as “severely retarded”

Play: No subject showed pretend or imaginary play, only 2 evidenced any complex play (“several different or heterogeneous behaviours that together formed one activity”), the other 17 subjects just showed simple play (“the same elementary but appropriate response made repeatedly”)

Speech: 1 subject showed minimal appropriate speech, 7 displayed echolalia, 11 were mute

After the groups had been exposed to the treatment for 2 years findings showed some drastic changes:

“at intake, there were no significant differences between the experimental group and the control groups. At follow-up, the experimental groups as significantly higher than the control groups of educational placement and IQ”

The children from the experimental group showed an increase in the likelihood to progress in education. Additionally, the experimental group gained an average of 30

IQ points more than the control groups. The result of this for the experimental group was that the number of subjects in the “normal” range of intellectual functioning increased from 2 to 12 and the number of subjects in the moderate-to-severe range of “intellectual retardation” [sic] dropped from 10 to 3. In comparison “follow-up data from the control groups show that their subjects fared poorly: Only 1 subject (2%) achieved normal functioning”.

Perhaps the most significant finding for Lovaas was, that unlike previous treatments, the results appeared to be sustainable as “[a]s of 1986, the achievements of experimental groups subjects have remained stable” and “only 2 subjects have been reclassified: 1 subject (now 18 years old) was moved from an aphasia to a normal classroom after the sixth grade; 1 subject (now 13 years old) was moved from an aphasia to an autistic/retarded class placement.”

Lovaas’ findings are hailed as the first to prove the benefits of A.B.A., the paper proves that the treatment can have a positive effect on the educational progression and intellect of autistic children.

4.3 Exposition of Communicative Beliefs

4.3.1. Normality and Deficiency

As Lovaas adopted a continuation of Kanner’s work on autism, the two works share many of the same beliefs about communication. The most prominent and influential of the assumptions bequeathed by Kanner is the assumption of an autism communication deficiency. Lovaas’ work does not deviate from Kanner’s path of conceptualising autism by the identification of deficient social and communicative behaviours when compared with normality. The conceptualisation of deficiency is the

foundation of A.B.A. from Lovaas to present day, autism must be deficient to require treatment.

Not only does Lovaas inherit the deficit approach from Kanner, but it is also a necessary component of his own theoretical perspective. The field of A.B.A. relies on operant conditioning, the fundamental principle of which is the creation of an association between behaviour and consequence i.e. the rats creating the association of either food or punishment when pressing a lever. While the rat example is done in a controlled environment, operant conditioning is claimed to occur both naturally and socially. The question must be asked then: why have autistic children so far not learnt the social and communicative behaviours that normal children have? The answer must be that autistic children are deficient.

Lovaas does not use the word deficient, he merely says:

“One may assume that normal children learn from their everyday environments most of their waking hours. Autistic children, conversely, do not learn from similar environments.”

There is no fault with the theory of operant conditioning, it is autistic people who simply do not adhere to its principles. For A.B.A. to be effective in the treatment of autism, it must then establish what environments an autistic person can learn in.

Lovaas hypothesise that the:

“[C]onstruction of a special, intense, and comprehensive learning environment for very young autistic children would allow some of them to catch up with their normal peers by first grade”,

The two previous quotes appear consecutively and form an essential part of the entire field of A.B.A. Without this passage from Lovaas, there would be a problem at

the centre of A.B.A. autism treatment. The problem would be that daily social operant conditioning, which is argued to be *the* learning mechanism by A.B.A. practitioners, appears to fail the autistic child. Lovaas appears to conclude that the experiences of day-to-day reward and punishment are not strong enough, or focussed enough, for the autistic child, therefore A.B.A. provides a more intense and focussed stimuli for them to learn from. Instead Lovaas had engineered the onus of failure in day-to-day operant conditioning to be on the individual. The autistic individual requires a “special, intense, and more comprehensive” environment to drive learning, but the basic principles of operant condition are still sound despite autistic people requiring more specialist input.

A further consideration for deficiency is what autistic children are deficient in relation to. Unlike Kanner, the matter of what justifies normal is not entirely ignored by Lovaas who does provide the following definition of normal functioning: “children who successfully passed normal first grade and achieved an average IQ on the WISC-R test”. The degree to which this statement best represents normality is debateable. It is highly ethnocentric and relies entirely on the abstract scores that are the result of taking both the WISC-R test and standardised school testing. Both these tests are based on their own assumptions of normativity, reward certain intelligences over others, and have testing conditions which do not adhere to many autistic people’s needs. Lovaas has taken these tests as benchmarks of normativity, without addressing the issues with the tests themselves, and the concepts upon which they are based.

The first criteria of progressing to second grade, ignores external factors such as the teachers, parents, school policy etc. Setting passing first grade as a criterion

suggests that normality is an innate state, possessed from birth. If autistic people are predestined to fail first grade, so are “normal” people predestined to pass it.

Secondly, the WISC-R testing is not as objective as it may appear, and if Lovaas had the opportunity to base his work on the Asperger’s paper instead of Kanner’s then he may have been more hesitant to administer the testing. Asperger points out the hidden obstacles to success for autistic individuals in such tests and suggests that results do not always accurately reflect an autistic person’s intellectual capacity (Asperger p.52-56).

Putting these censures aside, Lovaas’ two criteria for normality have little to do with normal behaviour. A child can self-stimulate, display echolalia or any other of Lovaas’ targeted behaviour for modification and still have a high grade on IQ testing and pass the first grade. Lovaas has failed to consider what his diagnostic symptoms “mean” and what the relations between these criteria may be. There is a conflict between how Lovaas identifies somebody as non-autistic and how Lovaas targets autistic behaviours for modification. To further complicate the dichotomy between institutional criteria for normality and autism which is recognised in relation to normality but treated on unrelated behaviours, there is the consideration of the DSM which was used to first diagnose Lovaas’ participants. The DSM, which evolved in the time frame of Lovaas’ study, sets yet another set of criteria for qualifying as autistic¹⁵. Lovaas has constructed a very disorientating set of criteria for his autistic participants. The participants must be young, diagnosed as autistic and of a certain mental age; meeting these criteria requires the participants to meet a further set of autistic diagnostic criteria of various iterations of DSM as well as being able to

¹⁵ The DSM will be discussed at length in a later chapter.

partake in the IQ testing and record a score that reflects their intellectual capability. These participants are then targeted for modification on a new set of behaviours constructed by Lovaas but building on the work of Kanner. It is therefore hard to extract an exact set of core set of communication and social behaviours that Lovaas believes to define autism.

4.3.2 Environments and Context

Another salient communicative feature of note in Lovaas' work is the perception of environment and context. The experiment chose young children as "it was assumed that younger children would be less likely to discriminate between environments and therefore more likely to generalize and to maintain their treatment gains". Such comments provide a window into Lovaas' treatment of context and environment.

Firstly, artificially designed environments are not idiosyncratic. They are prescribed and predetermined contexts which are agreed upon by all. For example, the research lab is one context, and the home is another context. In Lovaas' critique of behaviour modification before A.B.A., he writes that "treatment gains have been specific to the particular environment in which the client was treated". In this case, the institute constitutes as the setting in which gains were made, and all other contexts saw no improvements in behaviour. For this to be accurate the autistic person must agree with the practitioner's perception of the institute as an independent setting. There must be mutual, unspoken agreement that the context is the specific institute setting. The environment is taken to be some objective fact, rather than a subjective perception of the salience of features. There is no room for the idiosyncrasies of context, for example, to the autistic person the institutional environment may not have been salient at all but the one-to-one format of interaction

may have been key. Other examples include the lack of overlapping speech, the lack of background noise, the lighting, the absence of a ceiling fan, the lack of bright colours in the room; this list is not exhaustive or based upon any accounts they are merely examples of what may be salient to that person. Lovaas leaves no room for suggestion that these are the things that may be salient to the autistic children in the studies, instead the environment is just a generic place.

The second observation about Lovaas' perception of context is dependent on the first, Lovaas' context is fixed. The institutional environment is the entire context, therefore knowing the setting allows one to know everything about the context throughout the duration of the observation. Lovaas' context is not a dynamic, constructed and negotiated phenomenon, that changes and evolves because of those behaviours that occur within it. The impact on this fixed view of context on A.B.A.'s understanding of both language and communication is extensive; it limits A.B.A.'s ability to understand the behaviours as not just a product of their environment but as something that contribute to the environment.

A.B.A. relies on the static and generalised perception of environment. Without a consistent and definable context, which can be controlled by those practising A.B.A., the treatment becomes much less robust. A.B.A.'s foundation is the ability to manipulate the environment to create outcomes that modify behaviours. Therefore, both the environment and the behaviours need to be viewed as ritualised concepts. If the context or behaviour was viewed in anything other than a fixed manner, then the behaviour would not be targetable, and the outcome would not be controllable.

Such is the focus on the environment, that Lovaas lacks any consideration to the cognitive work involved with learning the associations in A.B.A. Such it appears as if

the learning is reflexive, like reflexively pulling your hand away from a hot object, the autistic person reflectively withdraws from behaviours with adverse consequences, and reflexively adheres to behaviours which result in reward. There is no actual thinking involved in Lovaas' model. There is no agency of the autistic child, no acknowledging the ability to draw on the experiences and infer possible outcomes. Operant conditioning, and A.B.A., are entirely rooted in the environmental factors, which directly result in the changes of behaviours. The aspect of the learning individual is entirely absent from this model.

4.3.3 Language Acquisition

Lovaas hails the success of former behavioural treatment in building up complex behaviours such as language. The new approach is designed to emulate this success but also to allow the progress to become more sustainable. Lovaas wrote this paper in 1987, 28 years after Chomsky's resounding rebuttal of Skinner's behaviourism theory on language acquisition.

At this point it is necessary to provide a brief overview of Noam Chomsky, especially regarding his rebuttal of Skinner and behaviourism. In short, Noam Chomsky is responsible for the popularisation of the belief that human linguistic ability is innate rather than acquired.

Chomsky's argument is based upon an innate universal grammar, and a modular model of the brain that includes a language acquisition device. Innate universal grammar is the theory of an innate biological component to language which makes grammatical structures available to humans (see Chomsky 1964).

According to Chomsky, universal grammar is possible due to a Language Acquisition Device (LAD) (Chomsky 1964). The theory of modularity from Fodor, later posits the

theory that the brain consists of different areas or modules each dedicated a specific task (see Fodor 1983 for summary). Chomsky's work would have one of these modules responsible for acquiring language, this is the LAD. The LAD allows children to acquire universal grammar despite an apparent poverty of stimulus. Hoskins argue that children do not receive enough modelling of grammar to acquire it as they do, so there must be some innate propensity towards learning it.

It is not within the scope of this thesis to begin to discuss Chomsky's work in full and provide the counter points. The key points are that human's innately acquire language due to the brain being predisposed towards it. This school of thought rejects previous theories such as behaviourism (popularised by B.F. Skinner's *The behavior of organisms* in 1938), which presents language as something that a product of the environment (often referred to a nativism). Whereas Skinner believes that language is acquired through a series of reinforcements, Chomsky believes that human brains naturally allow for the capacity to learn and utilise language.

One of Chomsky's most celebrated papers (1959) was a critical analysis of Skinner's work, titled "Review of verbal behavior by B.F. Skinner." Chomsky's review was widely considered to have discredited the theory of learnt language via stimulus. It is this paper that is of interest to those engaging with Lovaas. Lovaas' work is a direct descendant of Skinner's. Chomsky's work has been challenged, for example see Andresen (1991 p. 49-50) who writes:

"If for some of you behaviorism is a spectral dragon, your hero will certainly be Chomsky who was, almost unilaterally, acknowledged to have slain that monster with the well-aimed lance of his 1959 review.... I have identified 4 reasons for the behaviorism's repression and/or the success of generative grammar:

cognitive taste.

ii) the legacy of the 1960's;

the power of essentializing humanism;

and iv) the discipline of linguistics as it conceived of itself through its textual tradition.

Changes in these same 4 categories have provided a more positive climate for behaviorism in the late 1980's."

So, it is not to be taken for granted that behaviourism is dead, and that all those theories based upon it should be dismissed out of hand. However, given the shaky foundations of behaviourism in the post-Chomskian era which Lovaas writes in, it would be reasonable to expect at least some engagement with the critiques of operant conditioning.

It is unusual that behavioural modification, A.B.A. and Lovaas have achieved such traction with their behaviourism-derivative in the treatment of autism. Especially regarding developing language and most notably syntax (a major area of Chomsky's challenge). A.B.A. offers little in rebuttal to Chomsky's arguments. There is no response to his comments to justify the continued treatment of behaviour as responses to stimuli.

Behaviourism certainly offers the crutch of an easily implemented system for the process of learning, especially when compared to Chomsky's innate alternative which offers little hope for autistic treatment in these areas. But A.B.A. practitioners and scholars have not engaged with the debates around behaviourism. Instead claims such as "[o]ne may assume that normal children learn from their everyday environments most of their waking hours." Are left relatively unsupported. A.B.A.

cannot verify the validity of behaviourism as a theorem for language acquisition yet tout a behaviourism derivative as the answer to improving autistic children's complex behaviour.

4.4 Concluding Thoughts

“Behavioural Treatment and Normal Education and Intellectual Functioning in Young Autistic Children” is the flagship paper of Ole Ivar Lovaas and is still used today to justify the effectiveness of A.B.A. The prominence of A.B.A. in society, predominantly in the USA, means that the principles held by A.B.A. are espoused by the public. Not only does A.B.A. spread beliefs about autism to autistic people, families of autistic people and others who take interest in autism, but it also provides an area for ongoing research.

A.B.A. is built upon the principles of behaviourism, a theory that has faced many challenges and rebuttals that A.B.A. fails to engage with. Instead, behaviourism is taken as gospel, and then implemented. The approach taken by Lovaas, and others is a back-to-front approach, by which it is accepted that operant conditioning is valid, it is implemented and then the end results are used to validate the methodology chosen. There is a circularity between approach and results that gives no satisfactory origin to this approach to autism.

Furthermore, both A.B.A.'s behaviourist roots and A.B.A.'s commercial success has developed an approach that leaves no room for discussion of idiosyncrasy. While the approach may be malleable to the identification of which behaviours to target, the implementation of A.B.A., the conception of autism and the prescription of context are rigid and immovable. Such rigidity is to be expected of an area of research that

has become a profitable product. A core, one size fits all, set of values must be held for A.B.A. to be successfully distributed to the public.

Chapter 5: Psychological Approaches to Autism

5.1 Introduction

The works of Kanner, Asperger, Lovaas, Wing that have been discussed so far, differ from in each other in several ways. However, what their papers all have in common is an approach based upon the observation and categorisation of autistic behaviours. Each researcher has based their definition of autism upon the premise that autistic individuals display behaviours that are observably distinctive from those behaviours of non-autistic individuals.

In contrast, the psychological approaches that follow are looking beyond behaviour, and are researching the psychological difference between an autistic mind and a non-autistic mind. The difference between a behavioural-based and a psychological-based approach to autism does not mean that the two disagree. Instead, the psychological approach represents a shift in focus that is mostly associated with the 1980s. The psychological approach is asking a different question to the behaviour approach. The behavioural researchers are asking *how* autistic people behave differently, while the psychological researchers are asking *why* autistic people behave differently. It should not be forgotten that these approaches still rely upon behaviour for the identification, analysis, and discussion of autism and autistic psychology. Yet they are only looking at behaviour in so far as it is a manifestation or a consequence of a particular underlying mental state or mental structure.

The psychological approach relies on the work of their behavioural-based predecessors; requiring the prior identification of autistic people so that they can identify the psychological differences from the presumed norm. The identification of

autistic people is based on the principles of the behavioural-based research which informs the diagnostic processes. It is acceptable to subscribe to, for example, Kanner's description of autism, *and* Baron-Cohen's et al's theory of autism.

Each psychological approach relies upon the presupposition of an autistic deficit.

The question being asked is *why* autistic people are deficient, not *if* they are deficient. Each paper aims to identify the core deficit of autism. The papers ask how an autistic deficit differs from deficits in other conditions. Four major psychological theories have emerged in response to this question:

- Executive dysfunction theory - Rumsey – Conceptual Problem-Solving in Highly Verbal, Nonretarded Autistic Men (1985).
- Weak central coherence theory - Uta Firth – Autism Explaining the Enigma (1981)
- Theory of Mind Theory - Baron-Cohen, Leslie & Frith - Does the Autistic Child Have A "Theory of Mind" (1985)
- Empathizing-systemizing theory (including extreme male brain theory) Baron-Cohen – Autism: The Empathizing-Systemising (E-S) Theory (2009)

Each of these theories is individual, although some are connect. There has also been some research proposing that no one of these theories fully encapsulates what is unique about autism, and that autism is a disorder best characterised by a combination of different primary deficits (see Goodman 1989, and Ozonoff et al 1991). Whether the view is that the central deficit of autism is one of these theories, or a configuration of multiple, the presumption remains that autism is the manifestation or result of a cognitive deficiency.

Each of these theories attempts to the autistic deficit in a process of the mind. However, the psychological processes of the autistic mind cannot be observed¹⁶ in the same manner that behaviour can. Therefore, various tests have been constructed to provide support for the psychological theories of autism. These tests relied on the completion of tasks that had been designed to prove the nature of the specific autistic deficit. Often, there is a circularity between theory and task that offsets the effectiveness of any data. The nature of this circulatory will provide the material for much of the discussion in this review.

Below is a review of the psychological approaches to autism. As with the previous reviews, key texts have been identified, and assumptions made about communication will be exposed. These assumptions permeate throughout both the theory and the methodology found in each of these papers.

5.2 Executive Dysfunction Theory

5.2.1 Introduction to Executive Dysfunction Theory

One of the psychological theories posited for identifying the central deficit of autism is the executive dysfunction theory. The executive dysfunction theory proposes that the unique trait of autism, is a deficit in the capacity for goal-orientated forward thinking. In the words of Ozonoff et al:

“Executive function is defined as the ability to maintain an appropriate problem-solving set for attainment of a future goal; it includes behaviours such as planning,

¹⁶ NB, brain imaging has been inconclusive, and discussion of brain imaging is beyond the scope and specialism of the present paper.

impulse control, inhibition of prepotent but irrelevant responses, set maintenance, organized search, and flexibility of thought and action” (1991 p.1083)

Executive function disorder, or executive dysfunction, results in a deficiency in forward-thinking ability. Consequently, a symptom of executive dysfunction is to become entrenched in a certain repetitive behaviour. Here lies the connection with autism, which is often characterised by its repetitive behaviour. Baron-Cohen (2008 p.52) summarises:

“[a]ccording to this [executive dysfunction] theory, this can explain the repetitive behaviour in autism, since if you cannot plan actions or shift attention, your behaviour would become ‘stuck’ in the same groove, unable to move flexibly onto a new plan or path. You would, according to this theory, be destined to repeat or *perseverate*” (italics original).

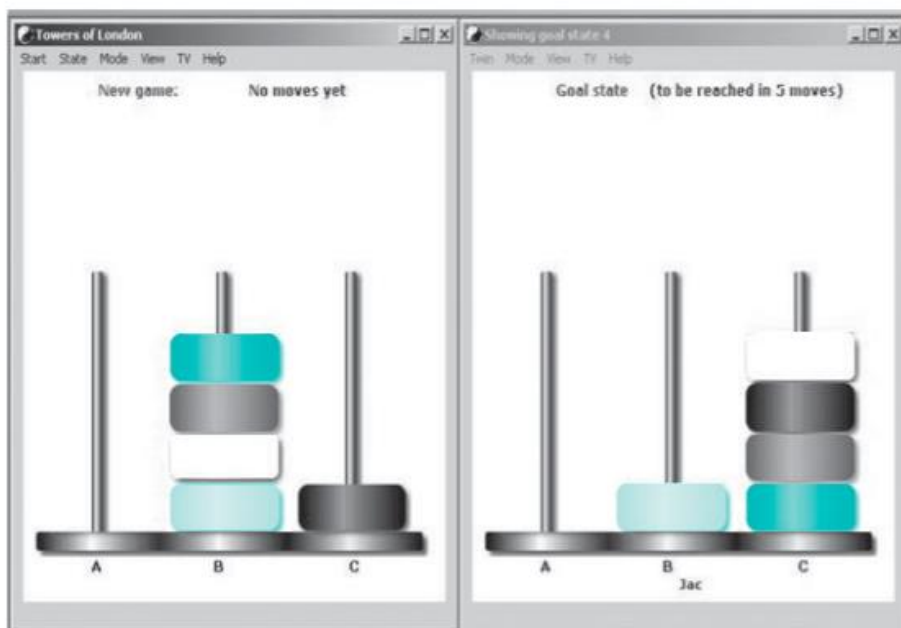
Although now linked with autism. the first mention of an executive function disorder was from Steel, Gorman and Flexman in 1984 in their discussion of damage to the prefrontal lobe. Steel et al conducted several tests, including the card sorting test mentioned below in the discussion of executive function testing. Steel et al’s results show the subject to display a great difficulty in executive dysfunction on a psychological test. However, the tests showed a less severe impairment in memory and language, and no impairment in visuospatial and non-verbal skills.

Consequently, this theory also proposes that the autistic pre-frontal cortex may be developmentally atypical. Thus, the severe impairment to executive function being the hallmark of the autistic deficiency.

Steel et al’s work was based upon a single case study. More research was required to develop the executive dysfunction approach to autism. The first empirical

investigations of executive function disorder in autistic subjects were performed by Rumsey in 1985.

There have been several executive function tests, such as the Tower of London test, which presents the participant with a collection of disks on pegs. The participants must move the disks from a starting pattern to a finishing pattern in the fewest number of moves.



The Tower of London Test, graphic from Baron-Cohen 2008 p.52

A further test for executive dysfunction is to assess verbal fluency. Such as asking the participant to name as many words beginning with the letter “S” as they can in one minute (Baron-Cohen 2008 p.53).

Another popular method is the Wisconsin Card Sorting Test (WCST). The WCST is used in both papers from Rumsey and from Steel et al but was originally invented by Grant and Berg (1948). The WCST “measures set maintenance skills, the ability to

flexibly modify incorrect strategies and the ability to inhibit prepotent, but incorrect, responses” (Ozonoff et al 1991). In doing so, the test is theorised to be able to differentiate between those with a frontal lesion and those with other forms of cerebral damage.

The test places 4 cards in front of the participant, these cards differ in size, colour, shape, and number. These initial four cards are known as the “key” cards. Each participant is then given two decks of cards, all of which share these same sets of differences. The participant then must match cards from the deck with one of the key cards. The researcher tells the participant if they place a card correctly, or incorrectly but does not reveal the sorting strategy. Once 10 cards are correctly placed, the researcher will change the sorting strategy without the participants’ knowledge. Once the strategy has changed, the participant will begin to receive negative feedback on their approach and will have to adapt to the new strategy.

Several variables can be recorded. The number of successful matches is recorded, as is the number of errors, this highlights the participant’s understanding of the nature of the task. The number of times the participant persists to continue down the same pattern is also recorded. For example, if the participant successfully matches colour to colour, and then the rule changes, for how long does the participant continue to sort by colour despite negative feedback. Finally, the number of times the participant failed to sort the ten cards necessary to complete the category despite getting at least 5 correct answers in a row was recorded with the intent of accessing the ability to consistently apply a known rule.

Each of these tests is designed to make the participant rely on the ability to plan and adapt new strategies. Each immediate move in each test has immediate

consequences on the overall ability to complete the task. Participants are assessed on their ability to adopt a long-term strategy, and their ability to access and adapt that strategy.

Research into executive function and autism often adopt one of these tests as the basis for proving executive dysfunction. The original empirical testing, as already mentioned, came from Judith Rumsey in 1985.

5.2.2 JM Rumsey – Conceptual Problem-Solving in Highly Verbal, Nonretarded Autistic Men

Rumsey's paper provides the first empirical study of autism and executive dysfunction. While Rumsey does not use the term "executive function", Rumsey's work "explores conceptual problem solving" (1985, p.24).

Rumsey's paper is a prototypical, psychological autism paper, rooted in a model of deficit and dedicated to the pursuit of identifying the nature of that deficit. Rumsey begins by acknowledging the core social characteristics of autism that have been identified by prominent predecessors; before proposing that cognitive impairment should be viewed as an accompaniment to these social deficiencies.

Rumsey separates social impairment from cognitive deficit based on the existence of autistic people with average or above IQ, who still exhibit the characteristic social impairments. By representing cognitive impairment as entirely separate from social impairment, Rumsey's work differs from some previous psychological papers that offered cognitive impairment as a contributing factor to social deficit (Rumsey 1985, p.24).

The collaborative view of deficit, which allows for both social and cognitive deficiencies, allowed Rumsey to also explore the relationship between conceptual problem solving and social-adaptive impairments.

The methodology chosen by Rumsey for the exploration of autistic conceptual problem-solving ability is the Wisconsin Card Sorting Test which has already been detailed above. The WCST allows for the recording of many different variables, Rumsey records 10 of these:

1. Number of categories complete
2. Number of perseverative responses
3. Number of perseverative errors
4. Number of non-perseverative errors
5. Total errors
6. Percentage of responses accounted for by perseverative errors
7. Number of trials to complete the first category
8. Percentage of responses accounted for by conceptual-level responses
9. Failure to maintain set
10. A "learning-to-learn" score, which reflects improvement

(Rumsey 1985 p.28)

Eight participants were included in Rumsey's WCST, and results allowed Rumsey to draw the following conclusions:

1. High-functioning autistic men do show significant deficits in conceptual problem-solving
2. These deficits involve both deficiencies in conceptual level responding and a tendency to be persistent

3. These deficits are independent of IQ
4. Considerable heterogeneity is characteristic of autism

Rumsey's work provided the first evidence of an autistic deficiency of executive function, although never achieved its goal of linking this with the social-adaptive functioning of the autistic individual. Although not managing to confirm any link between neuro-psychological traits and social impairments, Rumsey's work did serve to strengthen the comparison between autistic people and people with pre-frontal lobe damage while also lending support to the characterisation of autistic people as excessively perseverative with narrow interests.

5.2.3 Existing Criticisms of Executive Dysfunction Theory

The executive dysfunction theory hasn't gained as much popularity as some of the other psychological approaches despite some notable papers in the area. The testing for executive dysfunction for autism has been inconsistent and results often show some autistic people who perform well on tests such as the Tower of London and WCST. Consequently, tests such as the verbal fluency test exist seemingly to provide the results that the other tests didn't, rather than because of critical engagement with the rationale of previous testing.

The verbal fluency test hypothesises that autistic people cannot list as many words beginning with a certain letter as their non-autistic counterparts. The method has been criticised for assuming that this is due to an executive dysfunction, rather than autistic people organising their memories in a way other than an alphabetical list (Baron-Cohen 2008 p.53). It certainly seems that the reason for repetitive reforming of testing is that tests haven't produced the "right" results, rather than any critical

communicational engagement with the presuppositions or rationale behind the tests themselves.

Baron-Cohen provides further criticisms of a similar kind. Such as the portrayal of autistic narrow interest as a reflection of an inability to shift attention (ibid) rather than applauding the autistic brain for its ability to go so deeply into a subject, which executive function disorder fails to recognise. It is possible to expand on this criticism by adding that tests such as the WCST are designed with a circularity that rewards change and not perseverance. It would be just as easy to design a test that rewards those who persevere with an approach. Not every situation requires an ever-adapting approach, many of life's skills require a persistence and dedication to the honing of one approach.

Life skills also require embedded subtle judgements on context, and the right contexts in which change, or perseverance are needed. All the above tests have levels of ambiguity in this regard, with the added "rules" of operating within that context. The ability to adapt, and perform a task, in a context with these new "rules" is proof enough of adaptability, the behaviour of complying with the task is an indicator of the ability to be flexible in a person's approach. The researchers have failed to consider the role of the task within the wider life of the individual. Success is merely judged on success and failure of a task, with no thought being given to the change that task represents to any "normal" or more typical experience.

5.3 Weak Central Coherence Theory

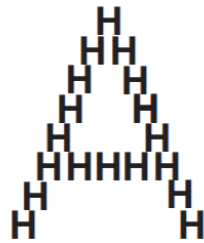
5.3.1 Introduction to Central Coherence Theory

Weak Central Coherence Theory (henceforth WCCT) posits that the specific deficit of autism lies in the inability to see the 'bigger picture'. The autistic mind is depicted as extremely detail orientated but lacking in the ability to integrate these details to construct a coherent picture of the whole. For example, the theory posits that a non-autistic person may notice a room of full bookshelves which are all organised into rows and deduce that they are in a library, whereas an autistic person may not arrive at the same conclusion, but will instead commit to memory the book titles, authors and reference numbers on one of the shelves.

WCCT does also allow for the recognition of an inherent strength to being autistic, by observing an increased attention to detail. WCCT posits, that when performing tasks that require great attention to detail, autism can be an advantage, while when performing tasks that require a more holist approach, autism can be a disadvantage. Using the above example, if the autistic person and non-autistic person in the library were asked to describe their experience to others, the non-autistic person would presumably give the more recognisable definition of the library context. Whereas, if the same two people were asked to provide the dewey decimal reference number for a specific text, the autistic person would be at an advantage.

WCCT posits that autistic people focus on the finer detail, but do not piece these details together to create a cohesive, holistic perspective. The easiest way to summarise this argument is to introduce one of the tests for WCCT. Here the test will be used only to support this summary of WCCT. A more comprehensive discussion will be provided later in the present chapter. The test shown below is the Navon test

in which participants are presented with this picture. When describing this picture, WCCT posits that autistic people are more likely to report that they see “H” s, rather than seeing a large “A”. The inverse is true for people that are not autistic or have a stronger central coherence.



Taken from Baron-Cohen 2008, p.56

The detail orientated nature of autism was observed long before WCCT was formulated. Leo Kanner originally observed an autistic penchant for detail in 1943 stating that: “On one of the bookshelves, we had three pieces in a certain arrangement. When this was changed, he always rearranged it in the old pattern” (1973 p.9). Such descriptions are consistent across many reports from practitioners and lay people alike. These reports are so consistent that obsessive attention to detail has become a stereotype of autism. The first to formulate the detail orientated nature of autism into WCC was Uta Frith in her 1981 work “Explaining the Enigma”.

5.3.2 Uta Firth – Autism Explaining the Enigma

Uta Frith is one of the biggest names in autism research. Her approach to autism does have some factors the separates it from some of the older papers. Frith recognises that autism “is not a disorder of childhood”, writing that instead it is a “disorder of *development*” (1981 p.1, emphasis original). It is progress to see an acknowledgement of autism beyond childhood:

“Autism has to be seen not just as a snapshot. Since it is a disorder that affects all of mental development, symptoms will look different at different ages. Certain features do not become apparent until later; others disappear with time” (ibid).

Frith also subscribes to an autism spectrum, thus recognises diversity across different participants and their autistic experiences.

Frith also recognises the future of autism will include input from outside of sciences and medicine:

“Parents, teachers, clinicians, and individuals with autism themselves...will all contribute rich new perspectives to the scientific understanding of autism. Autism is far too fascinating to be treated solely by scientists” (p.223)

Yet it is still a scientific understanding, or a medical model of autism, which Frith is seeking. Frith is still in the deficit camp. Words such as disorder imply as such, and the discussion of one of Frith’s theories “weak central coherence” below, confirms as such. Frith is still looking for the central autistic deficit. No more evidence is needed of Frith’s subscription to deficit than in an examination of one of her closing remarks:

“A person with autism with many compensatory skills tends to get less sympathy than the one who is totally mute and aloof. “Surely, he can’t have autism – he makes eye contact and he speaks to me” is a familiar remark...The common point here is that appearances can be deceptive. Compensatory learning does occur, but this does not mean that the underlying handicap has vanished” (p.222).

While progressive in some of her discourse, Frith ultimately adheres to the autistic handicap. Autistic people who do none traditionally autistic things are merely compensating for said handicap.

Uta Frith was the first to propose a theory of weak central coherence in 1981 after observing the alternative ways autistic people solve jigsaws. Frith and Hermelin had investigated the puzzle solving abilities of autistic individuals in 1969 and observed that the autistic child would put the jigsaws together based upon the shape of the pieces, rather than the picture upon the pieces. In this way, the autistic child could complete the jigsaw just as easily when the pieces were placed face down as they could when the pictures were visible to them.

To test the consistency in these observations, Frith and Hermelin designed a study to observe children's performances on two types of jigsaw. One jigsaw had rectangular puzzle pieces with straight edges and a picture on the front, while the second jigsaw had no picture and traditional jagged jigsaw edges. Frith and Heremlin's work found their early observations to be consistent, the autistic children performed better on the no picture jigsaws than their non-autistic counterparts, while the non-autistic children performed better on the pictured puzzle.

These findings and observations provided the basis for Frith's central coherence theory, first published in 1981. First, Frith attempted to understand the autistic puzzle experience by contrasting her perception of the autistic experience to her own jigsaw solving experiences:

“When I do a jigsaw I am continually amazed at how different a fragment of visual detail looks when the puzzle piece is in place compared to when I just see the piece alone. I look for a piece with a dog's ear, for instance. At first it always looks as if there is no such piece, but once found and fitted, the detail is perfectly clear” (Frith

1981 p.152)

Frith offers some hypothesis on how the autistic experience may differ from this:

“Perhaps the child with autism can still see the individual puzzle pieces in the completed puzzle. Perhaps completing the puzzle is very much a piece-meal exercise starting from small sections and almost incidentally resulting in a large picture at the end.” (ibid)

Frith has constructed two different jigsaw approaches, the first takes Frith’s own experiences as the non-autistic experience, while the second takes Frith’s interpretations of the autistic experience as being an accurate account of the autistic experience. The former approach is top-down, starting with the larger picture and then recognising the individual pieces and their role within the larger picture. The latter is a bottom up approach, starting with the shapes of the pieces, and piecing them together almost without the aim of constructing anything so large as the entire jigsaw.

“As a metaphor, the jigsaw puzzle persisting as fragments even when put together, symbolizes the effect of autistic detachment. In contrast, for the nonautistic person, fragments, once assembled into a single picture, lose their meaning as fragments and are only meaningful as part of the greater unit they belong to, the whole picture.”
(ibid)

For Frith, these observations of jigsaw solving techniques become about far more than an individual’s approach to solving a puzzle. From the jigsaw metaphor, Frith begins to draw conclusions about autistic experiences in everyday life. The fragment by fragment approach described in terms of the jigsaw, is used in other situations too. Autistic people will focus more intently on one ‘piece’, or one unit of the context. These conclusions are parallel with previous observations of the trademark autism detachment.

In contrast, a non-autistic person, creates a bigger picture of situations that they are in by combining the fragments of information that they have, this process is referred to as contextualisation. Frith pays lip service to the connection between context and meaning but without engaging with any contemporary theories on the subject (ibid). Instead, Frith theorises that a person with strong central coherence will combine an element of the context to create a larger picture, which in turn allows them to create meaning. For example, in the context of being a pedestrian on a pavement, a process of integration must occur to know that you do not have to stop when you see a stop sign. According to Frith's theory, the pedestrian must notice the stop sign, the fact it is pointing at the road, the fact cars stop at it, the fact other pedestrians are not stopping, the fact that there is no line to stop on the pavement etc and conclude that the stop sign does not mean stop for them. The driver must make similar observations to take the meaning that the stop sign is for them. In Frith's theory there is no mention of prior experience being part of the context. Most people will recognise the sign's round shape, red background, white writing etc. from previous times that they have seen it. Their previous experience will inform them that the sign is targeted at the motorist. But Frith's theory, perhaps because of being built upon the jigsaw metaphor, is temporally constrained. It is restricted to meaning being created by the observable pieces in that moment, whether they be physical or social. Autistic people, and others with weak central coherence, have a "lack of drive for meaning" (ibid). The process of meaning construction through contextualisation does not occur in the same holistic and organic way that it does in people with strong central coherence. To refer to the library example, given previously, recognising the multifaceted features of a library and knowing that it is a library, is not the same as reading the spine of several books.

Returning to the jigsaw example, to expand on this point, Frith writes that an autistic person still sees the individual pieces once the jigsaw is complete. Frith describes a tendency to see the individual pieces rather than the whole picture. This is not the same as total inability to see or conceive of the whole. Autistic people must be able to conceive of a whole to complete the jigsaw. Instead, what is described is a tendency. Non-autistic individuals may have a tendency to see the whole picture once it is completed, but can readjust focus to bring one single piece into focus. There is nothing in Frith's work to suggest that autistic people cannot, likewise, consciously adjust focus to see the whole picture.

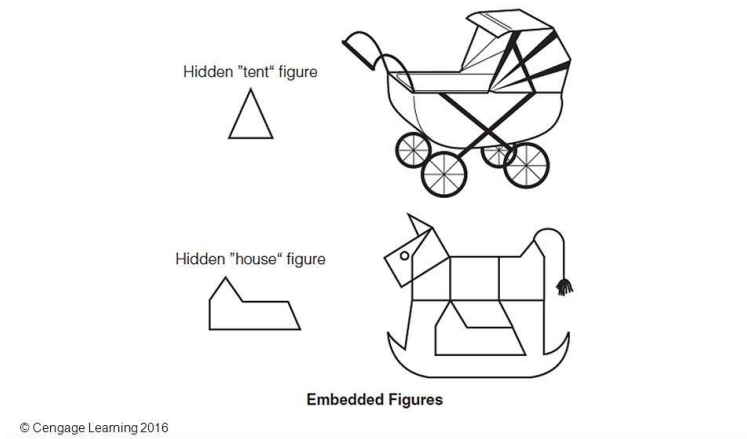
When completing the jigsaw, Frith observes that autistic people are more adept at completing the jigsaw based on shape rather than image. Yet in Frith's conclusions, she does not see taking jigsaw shaped pieces and creating a square or rectangle as integrating parts to make a whole. There is no discussion why this is any less of a process of integration or contextualisation than piecing together a picture. It is still a process of assembly, but the process is based upon different points of significance. It could certainly be argued that Frith has merely observed that shape takes prominence over picture for autistic people. After this stage, the processes of combining points of significance to create a whole seems remarkably similar .

Once Frith has formed the theory of central coherence, there had to be a way to evidence its validity. Several tests have been designed to this end. The two that are referenced by Frith's are the "hidden figures" test and the "block design" test.

Frith accredits the use of the hidden figures test to her PhD student Amitta Shah, who had seen the jigsaw studies and wanted to extend it to a similar pre-existing

game. The task is quite simple, the participant must find a specific shape, in a larger picture made up of shapes (see below).

Embedded Figure Test



Embedded/Hidden Figures Task

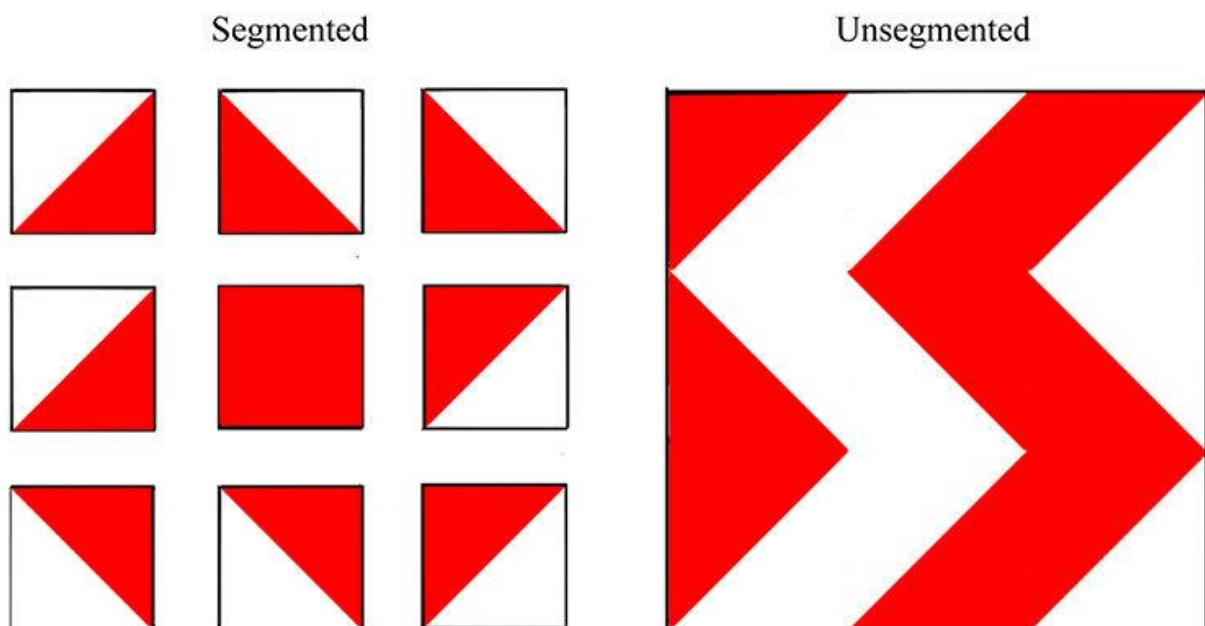
The Children's Embedded Figures Test was already a standardised test designed by Witkin et al in 1981; but it was Shah and Frith who first applied the test to autism. Shah and Frith theorised that autistic children would benefit from their attention to detail when completing the task (Shah and Frith 1983). Her findings supported this, showing an above average score for autistic children, who were faster and more accurate than their non-autistic counterparts with the same mental age.

The original test designers, Witkin et al, theorised that those who perform well on the embedded figures task, will also perform well on other tasks which measure what they call "field independence". Field independence is described as an independence from context. A field independent person performs well on tasks which require a lack of contextual influence are not affected by crazes or other people's opinions. In contrast, field dependent people are easily swayed by others' opinion and tend to take on the prevailing views of their group. Frith states that field independence and

field dependence “map closely” onto the terms strong central coherence and weak central coherence (p.154).

In summary, Frith also draws a connection between field independence and weak central coherence the defining characteristic of which is an “unusual ability to disregard context”. Such a detachment from context, Frith argues, is indicative of the social detachment now so closely associated with autism. The concept of extending these theories to social interaction is another idea which can be traced back to Witkin et al, whose field independence did not just include visual perception skills, as seen in the hidden figures test, but also social interaction.

The second test referenced by Frith is the block test. The block test was originally designed by Wechsler in line with his model of intelligence. The block test was designed to assess spatial ability by asking the participant to replicate a pattern in a picture, using a series of patterned blocks (see image below).



When applied to autism the block test, in a familiar fashion, compares results from three groups of people: autistic people, non-autistic people with no learning

disabilities and non-autistic people with a learning disability. The observations show that autistic people score as good, if not better, than the other two groups. In contrast non-autistic people with learning disabilities are shown to struggle with the test.

Frith explains the link between the Block Design test and the Hidden Figures test to highlight the commonality in required skill between the two:

“The critical feature that links Block Design to Embedded Figures is that a big geometric shape, a gestalt, has to be broken up into small shapes. The big shape has to be copied with little building blocks. The design elements that correspond to the blocks are in fact analogous to hidden figures. They have to be “found” before the design can be reconstructed. Hence the first problem for the person tested is to separate the given design into appropriate segments. This component of the task has little to do with what is generally thought of as spatial ability. However, it could have a lot to do with the postulated central coherence... [i]f children with autism show weak coherence, they should show less of a tendency to perceive the design as a whole, and the initial step of mental segmentation should be easy for them.”.

(p.155)

Frith make assumptions not just about the autistic process of solving the test, but also about how this relates to autistic life beyond the test. Firstly, Frith assumes that a process of deconstructing the big shape to find the smaller shapes, before reconstructing it with the blocks is the process that is being used. Frith does not appear to consider the possibility that other methods could have been used nor does Frith consult the test participants on how they completed the task. Some participants may have opted to construct their own shape with the blocks before using that in comparison with the original to edit and find the desired shape. Others may not have

“found” the individual shapes but instead attempt to recreate individual vertices and angles. There are innumerable different ways of approaching the task and countless ways of conceptualising the various pieces within the task. Frith’s observations assume that everybody approaches the task in the same way and to succeed or fail is based upon their proficiency at that method. Similarly, in the hidden figures test, there is no guarantee that people segmented the pram into shapes to find the desired shape.

If it were true that each person does use a method of segmenting the large shape, there would be no guarantee that each person segments it in the same way. It is only an assumption that each person tries to segment the pattern into blocks. A person segmenting the pattern could segment each of the small blocks and then look for cross sections in the main image. Segmentation is not a process that is universal, instead each person is likely to divide the shape up differently. Arguably this is even more true in the hidden figures test where there are many options. To assume that segmentation is universal, may only have small repercussions on the small scale of this test but when the test results are used to draw conclusions about the wider world the repercussions are significant. To assume that segmentation is not an idiosyncratic process is to assume that contextualisation, both social and otherwise, is not a process of creation. It is the extension of originally erogenous conclusions within the context of these studies to the wider aspects of life that allows a researcher to dismiss autistic contextualising as wrong or non-existent. Rather than asking what an autistic person finds relevant, researchers basing their beliefs on the principles above, can merely state that autistic people find the wrong things relevant, or that they find no relevance in anything at all. Consequently, each individual

autistic person's process of contextualisation is deficient or non-existent rather than different.

The discussion Frith provides around these two tests reveals contextualisation as a central component to Frith's understanding of autism. Built upon this model of contextualisation, and autistic lack of such, Frith can draw conclusions such as display autistic people have "a lack of drive for meaning". Frith sees meaning as embedded within a larger context, not within individual details.

While Frith does acknowledge the potential benefits to possessing a weak central coherence, this does not appear to extend to contextualisation. It is not that autistic people contextualise differently, but that they do not contextualise at all. There is a deficiency in context, which is offset by an efficiency in detail; this tells us two things about Frith's philosophy of contextualisation. Firstly, that it is possible to not contextualise at all. It is hard to imagine ever observing any detail without some notion of its situational relevance, at the least, the temporal and spatial contexts. Similarly, it is difficult to imagine observing any detail without some form of social contextualisation, some form of meaning attached to that object. Yet Frith leaves the possibility open that some things can be viewed entirely segregated from any other context. That things can be considered in a totally atemporal manner, with no thought of relevance the things have to its surroundings or to its relationship with the person viewing it. Thus, for Frith, something can be entirely meaningless.

Contextualisation and socialisation are often linked, and this link was drawn upon by Frith who theorised that weak central coherence would explain the pervasive social deficits associated with autism. Frith's theory of WCC and social deficit were abandoned academically after empirical evidence which suggested that WCC and

social deficit were independent rather than associated (see Happé 1997; Frith & Happé, 1994). WCC is still widely accepted as a theory, but as an explanation for the 'special abilities' some autistic people display rather than of social deficit. In discussions of autistic special ability, the attention to detail is what allows the potential for extraordinary displays of rote memory or an aptitude for mathematics. For an explanation of the social and communicative deficits of autism, it is now more common to look towards other approaches such as the theory of mind approach or the executive dysfunction approach. Although there are still those such as Plaisted-Grant (2015) who make the case for a connection between the detail orientated nature of autism and the pervasive social deficits of autism, making the case that many aspects of autistic behaviours stem from a single underlying autistic deficit. In many ways, Frith's initial hypothesis which linked the attention to detail to autistic social deficit was less problematic. The segregation of the two raises the issue of what is a social task and what is a non-social task. Also, if acute attention to detail affects contextualisation within the scenario of a non-communicative task, then why does it not affect contextualisation in social task? At what point does one stop performing detail orientated tasks and begin to interact socially? If the autistic special ability is related to language or the study of communicative timings, how does this bridge the gap between the two? These are just some of the questions that haven't been addressed by those who tout WCC for special ability but not for social communication.

It can be seen in many of the approaches outlined here, that the field of psychology sees a clear, if undefined, difference between the social and the non-social. The consequent effects of this segregation for some approaches (most notably theory of mind) are that they fail to acknowledge the social element of their own research

methods. But even outside of these specific parameters, can life truly be divided into areas of performing tasks and performing social interaction. Areas in which autistic people are advantaged or disadvantaged by WCC. Instead, it would appear more intuitive that all activities have a social and non-social component. All activities require a level of contextualisation (or integration in the sense used by WCC theorists), a level of social interaction and a level of detail abstraction.

Firth's description constructs the idea of the human experience being a metaphorical toolbox, with the human selecting the appropriate tool for each task at hand. In this metaphor humans may have some tools that are better than others or may select the 'wrong' tool for the wrong task, but it is still a process of deploying one tool. In this way there are clear parallels with Fodor's modularity, and a Chomskian approach to communication (see brief explanations of both these theories in Chapter 4). These theorists all share a segregated view of the human experience, in which the human deploys skills as appropriate. These skills act independently from each other. In Frith's work, this notion is so ingrained that Frith often fails to consider the difference in ways that people perform tasks. Instead, assuming that each person is following the same process, but some are better than others.

Perhaps ironically, in the case of WCC, a major criticism of such an approach is the failure to provide a holistic view of the human experience. Humans are, at any point, much more than what they currently doing. The autistic child completing the hidden figures task, is not completing that task in isolation from the rest of their lives. The child is drawing on a wealth of experiences, thoughts, emotions etc. that are totally inaccessible to the researcher. As with all the methodologies supporting these theories, there is a huge gulf between the person's experiences and what is observable to the researcher.

Thus far, the majority of Frith's work summarised above relates to Weak Central Coherence which, traditionally, may not focus on communication. Yet it has been shown that underlying elements of Frith's work of WCC rely on elements within the zeitgeist of communication, most notably the concept of contextualisation. Frith does dedicate a chapter of "Explaining the Enigma" to communication, or more specifically to communicative deficit. The chapter is entitled "Autistic Aloneness" (p.98-115).

To explain autistic "social ineptness" (p.98-100), Frith draws on theory of mind approach discussed and reviewed below, this is unsurprising as Frith is one of the authors of the key theory of mind paper that is reviewed in this thesis. Therefore, the main body of discussion is provided below. Yet Frith does add an interesting component in her brief discussion. Namely that the speed of interaction may be "too fast for the application of logic" for autistic children; "[y]et the speed is not too fast for the automated responses of ordinary children" (p.110). Speed of interaction is not an element discussed in the 1985 paper that Frith wrote with Baron-Cohen and Leslie. It adds a component to the theory that ties in well with the WCC: autistic people don't have the *time* to piece together the various parts of communication to make the whole, before the conversation has moved along.

Theory of mind and WCC are not mutually exclusive. Here Frith shows how the two are working in tandem. Thus, this section has engaged with WCC, its contribution to communication, and the ever-crucial role of context. The following section will move onto theory of mind.

5.4 Theory of Mind Approach

5.4.1 Introduction to Theory of Mind

Since the mid-1980s, the theory of mind approach (also known as mind-blindness theory) has been one of the most recognisable theories of autism deficiency. The theory of mind approach posits that autistic social deficiency is caused by a deficiency in the ability to conceive mental states in other minds.

The paper most associated with the theory of mind approach is the 1985 paper, 'Does the autistic child have "theory of mind"' from Simon Baron-Cohen, Alan M. Leslie and Uta Frith. The Baron-Cohen et al paper is subjected to analysis and review in the section below, but first it is important to ground that review in a brief history of theory of mind before it was repurposed for a description of autism. The impact of theory of mind in both autism and the wider psychological field cannot be overstated, Reddy and Morris (2004) note that 1 percent of all psychological research published between 2003 and 2004 referred to theory of mind.

The term 'theory of mind' is first used by Premack and Woodruff (1978). Premack and Woodruff describe theory of mind as a mental capacity of recognising mental states in others: "[i]n saying that an individual has a theory of mind, we mean that the individual imputes mental states to himself and to others" (p.515). The purpose of Premack and Woodruff's work was to analyse whether chimpanzees possess this ability of theory of mind.

Premack and Woodruff provide several examples of mental states that one may impute to another. The most prevalent of these are argued to be purpose and intention (ibid). There is little discussion of whether purposeful and intentional action

requires a purposeful and intentional state of mind. The swatting of a biting mosquito, for example, can be seen as a purposeful action, but arguably it is instinctive rather than requiring a state of mind that can be described as purposeful. The attributing of the state of mind in this case, and many others, would rely on the individual interpretation of the researcher, more on this critique later.

Others states of mind include those italicized in the example statement below:

“John *believes* in ghosts; he *thinks* he has a fair chance of winning,; Paul *knows* that I don’t *like* roses, she is *guessing* when she says that; I *doubt* that Mary will come; Bill is only *pretending*.” (ibid)

This list is not exhaustive, and Premack and Woodruff also list promise and trust in their examples (ibid). In addition to these examples, Premack and Woodruff also refer to what is now referred to as “second-order theory of mind” but is named embedding in this text. “Mary knows that John thinks he will win” (ibid). Premack and Woodruff do not unpack this in this paper as it is not productive towards answering their yes or no question. Second-order theory of mind is attributing state of mind to another mind. There is also third order “Harry doubts that Mary knows that John thinks he will win” (ibid) and so on. Premack and Woodruff do state that “[h]uman limits on embedding are not impressive: only about four steps make our species uncomfortable” (p.515 – 516). Having a theory of mind has also been referred to in consequent works as ‘mind-reading’ or ‘mentalising’.

Using the approach to communication applied throughout this thesis, several underlying assumptions about communication can be unearthed beneath Premack and Woodruff’s theory that human brains do have an innate mental capacity for imputing mental states to others. In the same fashion of the Language Acquisition

Device from Chomsky discussed in Chapter 4, the theory of mind approach must believe that human brains are predisposed to develop a mind reading ability. Yet if the theory of mind scholars engaged with Chomsky or innatism, it goes unmentioned in their work.

Furthermore, the concept of human theory of mind, at the stage Premack and Woodruff wrote their paper, is seemingly based on the authors' own experiences as humans and not, as is the case in their study of chimpanzees, on empirical data.

The second of these assumptions is that not only do humans have theory of mind, but they are also remarkably good at it. Premack and Woodruff's aim is just to provide a yes or no answer to the question of theory of mind in chimpanzees, but in a discussion of progressing their research they say:

“We will not be concerned at this time with whether the chimpanzee's theory is a good or complete one, whether he infers every mental state we infer and does so accurately, that is, makes the inferences on exactly the same occasion we do. These questions are not out of order, but they are, for the moment at least, too difficult to deal with experimentally... we may later seek to determine how accurate and complete his inferences are” (p.515).

Humans, based on no research, are placed as the benchmark of theory of mind. The human brain is naturally disposed to the imputing of mental states, at least with other humans.

The above statement also informs the reader that there is a correct outcome of theory of mind. It is not a subjective process that is based on individual experience; but it is instead an objective reading with a fixed outcome. The test of a “good or complete” theory of mind, is a theory of mind that is akin to the theory of mind

displayed by “us”. Such a theory of mind needs to match “ours” in both the mental states that are inferred, and the occasion of the inference. If this is not the case, then how else can a function of the brain be “correct” or “incorrect”? How can the input to said brain mechanism be measured? How can the researcher be sure that each brain is working with the same stimuli and not selecting different stimuli based on idiosyncratic perceptions of what is salient? Again, this circles back to normativity, with deviation from an undefined perceived norm being quantified as deficient. In short, there is a lack of evidential data that allows someone’s imputation to be deemed correct or incorrect.

If there is a correct outcome, then all humans must attribute the same mental states, at the same time, as each other. Therefore, any human that does not attribute mental states the same as their peers must be incorrect, if a singular instance, or deficient, if this is a recurring event. The notion of “good or complete” theory of mind, opens the door for its application to autism research, which will be discussed later.

Testing for theory of mind is no simple matter. In Premack and Woodruff’s words “a system of inferences of this kind is properly viewed as a theory, first, because such states are not directly observable” (p.515). The states which a being attributes to others are not observable, likewise, the actual attribution of these states is not observable. There is no way of testing directly for theory of mind. Instead, what can be observed is behaviour, and if a subject act in a way which suggests theory of mind, then theory of mind can be attributed to them. In doing so, the act of testing for theory of mind, would require a theory of mind. The researcher must believe in their own capacity of second order theory of mind, to conclude that a subject does indeed have theory of mind.

The device most used to conduct for testing for theory of mind is the False Belief task. The first false belief task used in the theory of mind approach to autism is the Sally-Anne test. The Sally-Anne test is detailed and discussed more extensively below, but here will be some discussion of more generic schools of thought on the false belief task.

5.4.2 Baron-Cohen, Leslie & Frith - Does the Autistic Child Have A "Theory of mind"

Much insight can be gained from the first paragraph of Baron-Cohen et al's paper. The first paragraph begins to describe what autism is, opening simply with the sentence "[c]hildhood autism is a severe developmental disorder" (1985, p.37). Immediately we see two cornerstones of this paper. The first is the explicit focus on childhood autism. Focussing heavily, if not exclusively, on childhood autism is a common trend that spans the decades of autism research. Social, linguistic and communicative development is usually associated with early childhood; thus, autism research tends to fixate on childhood. Using a small cross section of the autistic community is common practice and is something that will be discussed later in this review.

Secondly, the opening sentence betrays that Baron-Cohen et al subscribe to a deficiency model of autism. According to Baron-Cohen et al autistic people's development is not different but it is a "severe developmental disorder" (p.37). Such a statement is unsurprising for a paper of this period, but it is important to acknowledge the impacts of this approach on the conclusions that follow later in the paper. The use of "severely" is noteworthy, despite Wing's paper pre-dating Baron-Cohen et al by 4 years, the work for Baron-Cohen et al probably began before the

influence of this paper. The severity of disorder in Baron-Cohen et al's description does not appear to be a view that has been modified or influenced by the notion of a spectrum.¹⁷

Baron-Cohen et al acknowledge that "[t]he diagnostic criteria at present are behavioural", yet the use of "at present" implies that they expect scope for this to change in the future. Baron-Cohen et al's focus on diagnostic criteria belies the medical model and individual nature of impairment in their conceptualisation of autism. Their research seeks an undiscovered physiological and psychological component to autism.

Baron-Cohen et al list the main autistic symptom, "which can be reliably identified", to be an "impairment in verbal and nonverbal communication" (ibid). The notion that communication impairment can be reliably identified is quite telling. The paper treats communication as a standardised phenomenon, from which non-standardised communicative behaviour can be reliably identified. The standardised communication is also seen as an innate inheritance, and the fact it can be "impaired" implies a medical model, in which typical language and communication growth and development is impeded by autism. For identification to be considered reliable, then presumably identification must be consistent across different practitioners, patients, cultures and institutes. There is no discussion of any form of formal standardisation across the field other than the diagnostic criteria. Thus, the behaviours detailed diagnostic criteria must be universally recognised and not contextually dependent.

¹⁷ In fact, the words "spectrum" or "continuum" do not appear at all throughout the article. Neither does the name Asperger or the label Asperger's syndrome.

The conceptualisation of this impairment goes further, when it is claimed, in the same paragraph, that “the core feature of childhood autism... [is a] profound disorder in understanding and coping with the social environment”. It occurs to the linguist at this point how singular the portrayal of communication is. The autistic child’s interaction with both people and context is entirely one way. The autistic person is entirely responsible for the understanding of both people and context. There is no theoretical linguistic model which would support this. In very few linguistic models does the hearer/receiver/decoder become entirely responsible for the meaning making process. And Baron-Cohen et al do not engage with those extreme examples where this is the case. Neither do they reference the semantic and grammatical systems which are presupposed in these models. Baron-Cohen et al have constructed a new model in which the meaning is fixed, the message is infallible, and the autistic receiver is deficient.

The same model is then applied to autistic people’s relationships with other people: “the pathognomonic symptom is failure to develop normal social relationships” (p.38). The onus for building a relationship rests entirely on the shoulders of the autistic individual in the relationship. There is no thought for the idiosyncratic nature of the autistic person, the other participant, the context or the interaction between all those elements. Autistic people are failing to build relationships, when presumably a non-autistic person would succeed.

Also, prevalent here is the assumed link between these primary elements of autism. Baron-Cohen et al flit from behaviour to verbal communication, non-verbal communication, interpreting social environment and social relationships. Each of these is described in a way that suggests it is the primary feature of autism. When

these statements are laid out next to each other the relationship constructed between them becomes more questionable:

- “The main symptom...is impairment in verbal and non-verbal communication
- “The core feature of childhood autism... a profound disorder in understanding and coping with the social environment”
- “The pathognomonic symptom is failure to develop normal social relationships”

Given that these three sentences take place over the space of one short paragraph, it must be questioned why the authors give three separate features absolute precedence over all others. There are two possibilities. The first is that the authors view communication, understanding, coping and forming social relationships as one and the same. To lack communicative proficiency is to lack understanding and the ability to form social relationships. If this is the case, then is it true that every good communicator forms an instant social relationship? Do the authors of this text form instant, functioning social relationships that are full of understanding with every other proficient person that they meet? Is it also true that deficient communicators do not form good relationships? What about the relationship between pet and owner? The pet cannot be said to be a proficient communicator by human standards, yet there is certainly a proficient relationship between the two. These questions shall remain hypothetical as there is no way to answer them on behalf of the authors. However, these are questions that automatically follow on from the assumption that communication, contextualisation and social ability are the same thing.

The other possibility is that the communication, contextualisation and social ability are all symptomatic of one umbrella problem. In this case, they are not the same

thing, but for them all to be primary they must be part of a larger category that encompasses them all. There is no mention of what this category is, but the temptation is to interpret it as autism. Any other explanation is not forthcoming.

There is a circulatory between diagnosis and description:

1. Autistic individuals can be identified primarily by their communication, understanding and social proficiency
2. These characteristics are all part of the umbrella issue of autism
3. Therefore, autism can be identified by autism

Neither of these conclusions is satisfying. Yet there is no discussion of this throughout the text. Whatever assumptions have taken place here, have taken place without any signs of engagement. Baron-Cohen et al's description about autism is very telling about their own assumptions about communication, but do not begin to define autism in a satisfactory way.

In short, Baron-Cohen et al's opening description of autism closely aligns them to the original work from Kanner. Baron-Cohen et al's autism is a disorder, causing a hallmark deficiency in communicative, contextual and social skills. This version of autism is, by necessity, is judged in relation to some undescribed notion of normality, and invariably, autism falls short.

Despite having adopted a broadly similar model of autism to Lovaas and the A.B.A. movement, Baron-Cohen et al has some necessary and essential differences.

Foremost amongst these is the conceptualisation of the relationship between autistic individual and environment. Lovaas wrote:

“We hypothesized that construction of a special, intense, and comprehensive learning environment for very young autistic children would allow some of them to catch up with their normal peers by first grade”

Lovaas’ entire approach is constructed on the notion that the correct environment, over time, could allow autistic people to develop. In a statement that can contrast once the extensions of it are unpicked, Baron-Cohen et al (1985, p.38) write that:

“Autistic children find even the immediate social environment unpredictable and incomprehensible.”

Lovaas’ approach relies on an autistic child learning over time from their immediate environment with positive outcomes enforcing behaviour for the future. Clearly, a child who cannot predict an outcome based on previous similar environments cannot fit into Lovaas’ description. Similarly, a child who finds the environment incomprehensible, cannot learn because of said environment. Therefore, the behaviourist approach does not align with Baron-Cohen et al’s approach.

Similarly, the notion of treating autism does not entirely coincide with Baron-Cohen et al’s openness to non-behavioural ways of diagnosing autism. While treatment may be possible to lessen the behaviours identified as autistic, it would not be able to edit any neurological differences. Baron-Cohen et al would not treat limiting the display of diagnostic behaviour, as the treatment of the autism itself. Although the paper accepts that social competence can show “improvement due to intervention” (p.38), the conclusion is that “[a] picture of apparently intractable social impairment emerges in the clinical follow-up studies of autism” (ibid).

The relationship between Baron-Cohen’s et al work and Wing’s work has already been mentioned. The chronological proximity of the papers may have limited the

impact of Wing's work on Baron-Cohen's et al, and there is no discussion of AS, Hans Asperger's work or the spectrum/continuum. Consequently, it is unsurprising that Baron-Cohen et al are using a Kanneresque model of autism. However, there is less rigidity in this article than there is in Kanner. Baron-Cohen et al cite the work of Wing and Gould (1979) and acknowledge "the range of socially impaired behaviour: from total withdrawal through passivity to repetitive pestering" (Baron-Cohen et al 1985 p.38). There is some openness here to difference from case to case of autism, and some hints that this difference could be in severity, but it is not overtly presented as such.

On the matter of intelligence, Baron-Cohen et al write that the social difficulties occur "regardless of IQ" (p.37-38). IQ and social ability are kept as totally separate:

"[a]lthough the majority of autistic children are mentally retarded ... and although a number of their symptoms may be attributable to this fact... this in itself cannot be sufficient explanation of their social impairments" (p.38).

Baron-Cohen et al go on to cite the statistics that some autistic children display a normal IQ and that "mentally retarded non-autistic children, such as Down's syndrome, are socially competent relative to their mental age" (Baron-Cohen et al p.38, citing studies from Coggins et al 1983 and Gibson 1978). Baron-Cohen's work has a potential parallel to the linguistic approach of modularity, which also used IQ to support their theory, though Baron-Cohen does not go into this (see Brown and Jones 2014). These observations, inform a corner stone in this branch of autism research, this path of inquiry posits that:

"In order to explain the specific impairments of childhood autism it is necessary... to consider the underlying cognitive mechanisms independent of IQ" (p.38).

For Baron-Cohen et al, there are two salient truths. Firstly, that autistic people have social impairment and, secondly, that autistic people can have an average IQ. Ergo, autistic intelligence must be cognitively separate from autistic social impairment. Otherwise, an increase in IQ, would see a decrease in social impairment. Such a segregation of the human experience, is characteristic of an emerging tendency to compartmentalise the brain, epitomised by the work of Jerry Fodor (see 1983). Fodor's work is overly entrenched in the computational metaphor of the brain, and proposes a compartmentalised model of the brain, with separate mechanism for each separate function. For example, a language system, a social system etc. The above quote from Baron-Cohen et al shows the intention of separating IQ as a module, social impairment as another, and so forth. The separation of faculties in such a way was used extensively to bolster modularity by innatism, and it is not uncommon to see it emerge in discussions of disability and/or developmental language disorders.

Hand in hand with this concept of segregated mind, is the rise in the metaphor of the brain as a machine or computer. Indeed, the above quote show Baron-Cohen et al's subscription to such a metaphor in the phrase "underlying cognitive mechanisms". Cognitive functions, in this article, are not viewed holistically. They do not consider the function to be a product of the entire human experience, but instead to be the product of a small sub-section of the machine that is the mind. Just as a computer utilise different software for different functions, different parts of the brain are used for different functions.

The problem so far as Baron-Cohen et al see it, is not to prove the concept of these independent functions, but is the failure to categorise these functions, "[s]o far, nobody has had any idea of how to characterise such mechanisms in even quasi-

computational terms.” (p.38). Thus, the goal of their paper is to offer a suggestion on this front. Baron-Cohen et al propose a characterisation derived from a model of “metarepresentational development”, a model that derives from Premack and Woodruff’s “theory of mind” (see Premack and Woodruff 1978). In short, the theory of mind model is designed to describe the mental mechanism of “being able to conceive of mental states: that is, knowing that other people know, want, feel, or believe things” (Baron-Cohen et al 1985 p.38). The ability to attribute such mental states is described by Baron-Cohen et al as a “crucial aspect of social skills”. The relationship between theory of mind and social skills is not expanded on in this article.

The reasoning for the proposal of a theory of mind (T.o.M.) deficit in autistic children follows from conclusions based on the combination of several research papers. The starting point for this thread of thought is that T.o.M. is dependent on the ability to form “second-order representations” (Dennett 1978 and Pylyshyn 1978 in Baron Cohen et al p.38). Next Baron-Cohen et al cite that second-order representations are also responsible for the emergence of pretend play (Leslie in Baron Cohen et al p.38). Consequently, “[a]n absence of the capacity to form second-order representation, then, would lead not only to a lack of theory of mind... but also to a lack of pretend play” (Baron Cohen et al p.38). Finally, Baron-Cohen et al cite work from several researchers who have observed a “striking poverty of pretend play” (see Sigman & Ungerer 1981, Ungerer & Sigman 1981, Wing et al 1977, Wing & Gould 1979). The reason behind the autistic poverty in pretend play has not yet been discovered, although surprisingly Baron-Cohen et al do not propose that an inability to impute mental states of others, also means an inability to impute mental states of dolls, pretend characters, and other elements of pretend play. Instead, Baron-Cohen

et al posit that if autistic children are proven to lack T.o.M. then it also proves that there is a link between the poverty in pretend play and the lack of second order representations. Thus, begins the core premise of the paper, proving that autistic people lack T.o.M.

To prove this, Baron-Cohen et al draw on the false belief task. The use of the false belief task in Baron-Cohen et al was inspired by a previous paper from Wimmer and Perner (1983). Wimmer and Perner developed a paradigm for testing a person's understanding of the difference between their own beliefs and the beliefs of others. The false belief task, described as "ingenious" by Baron-Cohen et al (p.39) can be used on very young children, and to succeed in the task, a child has to be able to acknowledge that different people hold different beliefs. Acknowledging other people's beliefs, is then used as evidence for the capacity to conceive the mental states of others.

Baron-Cohen et al devised their own methodology for testing for T.o.M., called the Sally-Anne test (p.41). The Sally-Anne test is a false belief test that relies on the use of dolls. There are two main protagonist dolls, called Sally and Anne. Firstly, the researcher asks the Naming Question, which checks that the child knows which doll is which, 100% of the children got this question correct (p.41-42). Although, this question is designed as a control, it is more informative than the researchers gave it credit for. There must be a certain level of inference of others' minds to answer this question. To understand the requirements, the expected response, the social expectation, even of a question that appears factual in nature, requires an ability to understand the mind of another. This is not something that is acknowledged in the paper.

Then the researcher performs a short scene for the onlooking child:

- Sally has a marble, which she places into her basket.
- Sally then leaves the scene.
- In Sally's absence, Anne moves the marble from the basket and hides it in her box.
- Then Sally return to the scene.

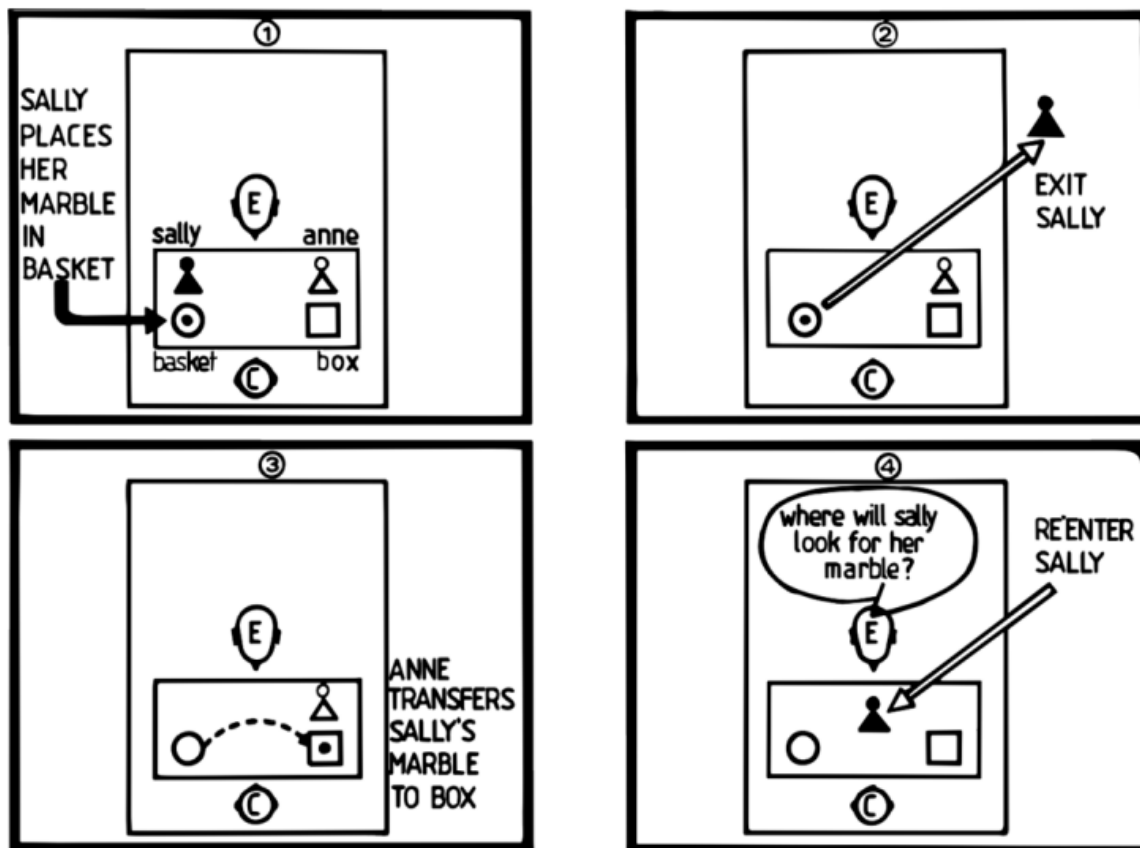


Figure 1 from Baron-Cohen et al 1985 p.41.

Once the scene is concluded the researcher asked the child four questions. The first question is called the "belief question" and is the real test of the child's T.o.M. The researcher's belief question is to ask the child "Where will Sally look for her marble?". To pass this question the child must point to the Sally's basket, as this is

where the marble last was to the best of Sally's knowledge. Should the child point to Anne's box, then the child has failed to consider Sally's false belief and has instead answered the question based on their own knowledge of the marble's current whereabouts. If the child point to Anne's box, then the child has failed the belief question (p.41).

In addition to the belief question, there are two control questions. The first is the Reality Question which asks: "Where is the marble really?". And the second is the Memory Question, "Where was the marble in the beginning?" (ibid). These questions are designed to test the child's knowledge of the marble's real current whereabouts, and the marble's previous whereabouts, therefore ensuring that the answers given can be labelled a product of T.o.M. and not of knowledge or memory. The results for these control questions were conclusive:

"all subjects without a single exception performed without any errors for both the Reality and Memory Questions in both trials" (p.42).

Later in the present paper, a criticism will be levelled at Baron-Cohen et al. about the separation of the Sally-Anne test from considerations of the social skills. While abilities of knowledge and memory are tested for control, there are oversights of social and communicative differences. However, there is some consideration of the child's access to the questions. Baron-Cohen et al do state that "[t]here is no reason to believe that the three questions differ from each other in in terms of *psycholinguistic* complexity" (italics original, p.42). Instead, the authors propose the hypothesis that the three questions "differ in terms of *conceptual* complexity" (italic original, ibid).

It is necessary, in a linguistic review of the study to unpack these two terms: “psycholinguistic complexity” and “conceptual complexity”. Beyond the use of these terms in the quotes above, Baron-Cohen et al provide absolutely no discussion or justification of these statements. Neither term is used again throughout the rest of the article and no reference is included to signpost the understanding of either terms.

Psycholinguistic implies a formulation of the link between language behaviour and psychological processes. From Baron-Cohen et al’s discussion of IQ, it can be inferred that such psychological processes would be discussed in terms of a modular, Chomskian approach to psycholinguistics.

In terms of the psycholinguistic complexity of the three questions that are being asked, it is natural therefore to assume that the psychological processes being involved pertain to lexis and grammar. To support this, each question has been designed to use broadly similar grammar and lexis:

1. “Where will Sally look for her marble?”
2. “Where is the marble really?”
3. “Where was the marble at the beginning?”

Each follows the same grammatical pattern, with the changes in tensing being the salient difference. Only question three includes an addition clause “...at the beginning” and this can be argued to be necessary to avoid confusion with the different stages of the task. Each use broadly similar vocabulary, only adding new vocab when it is necessary. The ability to answer any one question proves the psycholinguistic ability to answer the other two.

In terms of “conceptual complexity”, the easiest place to start is with contrasting question 1 with questions 2 and 3. The control questions have been designed to rest

heavily on the same conceptual notions that are needed in the belief question, concepts of location (“where”), temporal / sequential (“will”, “is”, “was”, “beginning”) and material (“marble”). If the child can grasp these three concepts, then they can answer questions 2 and 3. The conceptual difference is designed to be the concept of person. The other two questions control the other variables but not the variable that is the focus of study. The concept of person here does not just rest on the notion of identifying a person, in the same way that the participant can identify a marble. Instead, it is recognising the conceptual difference between a person and a marble, recognising that the person has a mind which holds beliefs, feelings and thoughts. In this way Baron-Cohen et al believe to have designed questions that ensure there is no “psycholinguistic” difference; the questions require the same psychological mechanisms of grammar, vocabulary etc. But the questions do test the conceptual difference of a person. One party is hypothesised to conceptualise a person with thoughts and beliefs, while the other party is hypothesised to not do so. Baron-Cohen et al’s premise relies on the separation of linguistic complexity from conceptual complexity, in this way the contextual and pragmatic presupposition of interpersonal communicational interactions can be emitted from the researcher’s consideration.

Here is a typical Chomskian approach, which separate linguistic ability as its own independent function. In this example, language operates totally independently from T.o.M. They are not constituent parts of a whole, neither are they viewed as a holistic attempt to create meaning. The psycholinguistic complexity of the question relates to the level of psychological function required to access the meaning of the question and answer it, regardless of whether the answer is right or wrong. The conceptual

complexity is the entirely independent ability to access the concepts to which the language refers. The concepts of place, person, time and material.

Baron-Cohen et al conducted the Sally-Anne test on children from three categories: “normal” [sic], Down’s syndrome and autistic. The Down’s syndrome category served to prove that T.o.M. was a deficit solely to be associated with autism. The results for Baron-Cohen et al’s study are collated in the table and charts (Figure 1 and Figure 2) (results from p.42):

Participant Group	Belief Question	Reality Question	Memory Question
“Normal Children”	23/27 (85%)	27/27 (100%)	27/27 (100%)
“Down’s Syndrome Children”	12/13 (86%)	14/14 (100%)	14/14 (100%)
“Autistic Children”	4/20 (20%)	20/20 (100%)	20/20 (100%)

Figure 1

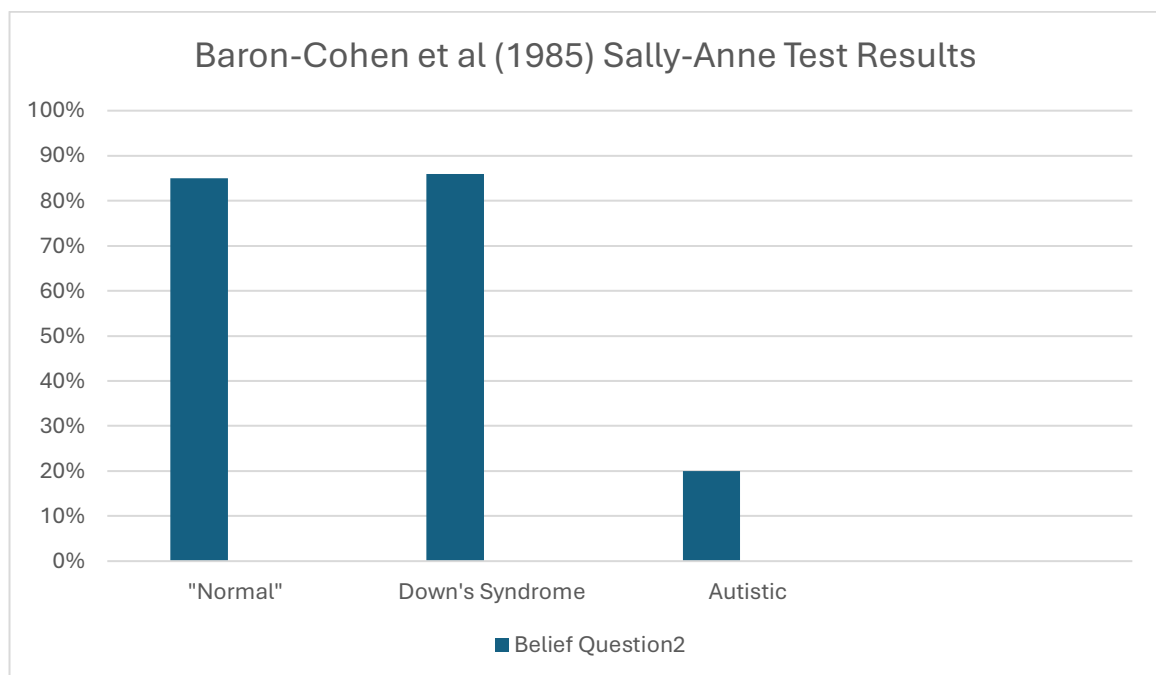


Figure 2

Clearly, autistic people fared less well on the belief question than the other two categories. Of the 16 autistic children to fail the belief question, 100% of them pointed to where the marble really was. The 4 autistic children that got the answer right were of average IQ, with evidence for this being shown on page 42 of Baron-Cohen et al's article.

It must be asked what constitutes a failure for the belief question. Clearly the researcher believe that failure is as black and white as being able to identify where Sally will look for the marble upon her return. There is no nuance for the variation in this *wrong* answer. Often the nuance will be unobservable, and the Baron-Cohen et al results have merely focussed on what can be observed (i.e. the answer given). Yet if one considers the two possibilities below, there can be a huge variation in the group that failed to identify the correct answer.

Firstly, there is the possibility that the person giving the *wrong* answer believes Anne to be dishonest or even more complex, the person answering believes that Sally believes Anne to be dishonest. Ironically, both beliefs would show an ability to impute mental states on to the puppets, with the latter even showing second order theory of mind. If the research participant believes either of the above statements to be true, then this will affect the answer that they give. The answer goes from "she will check the basket", to "she will check the basket because Sally knows that Anne is dishonest". Then the answer is vastly different, even proving a theory of mind.

A second possible response is one that identifies a consistent flaw in psychology research: the researcher forgets their own role within the experiment. The participant is not watching two people in naturally occurring circumstances, instead they are

being told a story about two puppets by a researcher. Burman (2008) observes a similar flaw, in which:

“it is unfortunate that experimental psychologists are particularly bad at viewing their experiments as social events, including interaction and relationships with participants” (p.58).

While the researcher might be narrowing the context down to the story of the two puppets, the autistic person does not necessarily do the same and the autistic person might be guessing at the researcher’s intentions. The autistic person may consider that the researcher has hidden the marble or used some sleight of hand to disguise its location. There could be several reasons for the autistic person to think this way. They could have recently seen a magician perform the trick with a marble and three cups where the ball is not where it appears. Or they could have taken part in studies of autistic people in the past where methodologies been set up to prove their central deficit and thus be wary of failing again and have second guessed their response. There are infinite numbers of experiences the autistic person could be drawing upon that leads them to question the researcher, not Anne the puppet, and therefore answer in a variety of ways. The answers are not recorded in Baron-Cohen et al, the reader only knows if the participant identified the basket or not.

The above examples are entirely speculative and fictitious, but they serve to demonstrate how answers can be motivated by other internal processes than a failure of theory of mind. In Chapter 6, a discussion will be provided of Harris’ interpretation of the experience of autistic person Daniel Tammet. Tammet discusses his experiences in class of not answering questions in class because:

“I did not realise that I was expected to say the answer out loud to the class”

(Tammet 2006, p.85, cited in Harris 2009 p.14).

Harris makes the point that this is very different to not answering because he did not know the answer, or because he did not want to answer the question. The same applies with the answer in the false belief task above. Judging neurological function based entirely on the answer given and then drawing conclusions about neurological functions of that individual is problematic.

5.4.3 Existing Criticisms of Theory of Mind Approach

Erica Burman provides a detailed yet succinct summary of the problems with the theory of mind approach (2008 p.57-60). Firstly, Burman draws on the work of Costall and Leudar (2004) and Costall et al (2006) who make the compelling case that the theory of mind approach rests upon an unintentional irony, that “in claiming to investigate how infants come to apprehend the mental states of others through the motif of ‘mind-reading’ the conundrum they find themselves in is the *reductio ad absurdum* of cognitivism” (in Burman 2008 p.57, italics original). Theory of mind testing requires theory of mind. By necessity, the T.o.M. approach presumes the existence of the T.o.M. In addition to this, it assumes that if T.o.M. does exist, that the researcher is particularly adept at it, as the researcher must correctly impute mental states to both the research subject and the research subject’s focus mind to access if ToM has correctly taken place. The researcher and the subject both require the same skill of interpreting observable behaviour in a manner that allows the inference of mental states. Burman (p.57) quotes Leudar et al in saying:

“The experiments do not just test the theory, but themselves reproduce the unnoticed assumptions of the theory. The ToM approach and false belief tasks both

intellectualize intentionality and put abstract solipsistic reasoning about solipsistic mental states on the centre stage” (2004, p.574)

Psychologists have a circularity between their hypothesis and their methodology, the research is designed in a way that cannot fail to prove the hypothesis. That is not to say that if the autistic and non-autistic children had shared the same results that the hypothesis would still be true. It is that the testing of T.o.M. poses the same problem to the researcher that is posed to the participant. Both must “go beyond the interpretation of observable behaviour to infer hidden mental events” (Burman 2008 p.57). The research must impute state of mind, and the researcher already is operating on the hypothesis of a lack of theory of mind. The researcher can only decide if their own hypothesis stands or not, based on their own interpretation.

Consequently, the methodology is both designed upon the same assumptions as the hypothesis, and unknowingly results in the reproduction of these same assumptions. For example, a test which separates linguistic complexity from conceptual complexity, will be designed in a manner to test one of these alone. The test will not embed considerations of the impact of linguistic complexity on conceptual complexity or vice versa. Nor will the study take steps to negate or analyse the role of linguistic complexity on conceptual complexity (or vice versa) on the results. The results themselves will only be viewed through the lens of conceptual complexity.

Furthermore, any results that may shed light, for example, on the role of linguistic complexity will be falsely attributed to the role of conceptual complexity. The entire structure of the psychologist’s experimentation and analysis is endlessly duplicating the separation of these two phenomena. The two are entirely separate, in theory, in experiment, and in analysis. The extent of this is duplicated across generations of thought, with new papers being published that continuously reinforce this pattern.

The separation of linguistic complexity and conceptual complexity is just an example borrowed from the discussion above. The duplication and circularity of unnoticed assumptions is rife in autism research, with concepts being embedded so deeply that it takes a conscious divergence from these practices to notice the self-replicating nature of these conclusions.

In the case of Baron-Cohen et al and T.o.M., even if the experiment provided no other proof of T.o.M., the results would have been collected with a procedure which apparently utilised T.o.M., thus T.o.M. cannot fail to be evidenced. The methodological framework governs the theory of the social behaviour. The T.o.M. approach embodies a cartesian separation of mind and body. Burman draws the link between the cartesian philosophy and the circularity of methodology, by drawing on Nelson et al (2000 p.67 in Burman p.58):

“Both the idea that understanding requires a theory and the idea that the theory is about other minds reflect the Cartesian assumption of one individual mind looking out at external reality to represent it as truthfully as possible. Knowledge of other minds is from this perspective the strong northern value of *individualism* as well as of *disembodied minds*, or in psychological terminology, of cognitive autonomy and primacy of the individual over the interpersonal” (italics original).

Burman adds to this that “[i]t is unfortunate that experimental psychologists are particularly bad at viewing their experiments as social invents, including involving interaction and relationships with participants” (p.58). Burman strikes on a legitimate criticism of ToM here and one that is arguably exaggerated when testing ToM in autism. Referring to Baron-Cohen’s paper, will consecutively notes the impoverished pretend play in autism before designing a pretend play-based experiment to perform

with autistic children. Researchers are often guilty of assuming that their recontextualization of an event to be an experiment, removes the salient features of the event to the subject. Autistic subjects are often tested on specific psychological features, using methodologies that require imagination, pretend play, two-way interaction and other skills that are argued to be core characteristic deficits of autism. While researchers often begin by acknowledging these difficulties for their autistic subjects in the context of wider society, it is rare that a psychological researcher will discuss the role of these difficulties in the context of their experiment. Consequently, how can one be sure that the difference in the results can indeed be attributed to a deficient T.o.M., and not to the involvement of pretend play and two-way interaction within the experiment.

The psychologists' view of communication in general is formed by their view of their psychological practices, rather than the other way around. The resulting outcome of this is that the experiments themselves are far more inconclusive than the researcher would have the reader believe. This prevailing flaw is not broadly acknowledged, as the accepting of it would lead to an almost total upheaval of research to date:

“We note a curious inversion, psychologists' accounts of mundane communication are modelled on practices of experimental psychological investigations rather than experiments analysed dialogically. Yet studies of the dialogical engagements of experimenter and participants would inevitably throw many of these experiments in doubt, as incoherent and as a investigating possibilities that the experiments themselves presuppose.” (Leudar et al 2004 p.615, in Burman p.58).

5.5 The Empathising-Systemising Theory

5.5.1 Introduction to the Empathising-Systemising Theory

Empathizing-Systemising Theory takes a medical approach, seeking to identify the characteristic deficits of autism. Drawing on the principles of ToM, E-ST proposes two central components of autism. The first a delay or difficulty in processing empathy, while the second is an enhanced capacity and drive for systemising.

Empathising- Systemising Theory (henceforth E-ST), is Baron-Cohen's response to a common critique of the T.o.M. approach. Most papers propose the dual central deficit of autism to be a social deficiency coupled with narrow interests and repetitive behaviour. T.o.M. only manages to account for the social deficit, but neglects to address the narrow interests and repetitive behaviour. E-ST build on T.o.M. to extend the description of autism and explain the dual central deficit of autism.

To address both components of autism theory, E-ST is separated into two faculties, empathising and systemising. The theory of empathising is also separated into two components. The first of these components is 'cognitive empathy'. Cognitive empathy is based upon the principles of theory of mind. Therefore, the points raised in the T.o.M. section above are still relevant to cognitive empathy. Consequently, there will be little discussion of cognitive empathy to follow. Discussion will instead focus on the systemising and affective empathy aspects of this E-ST.

The second component of empathy is 'affective empathy'. Affective empathy is the response element of empathy. After the process of cognitive empathy, the individual must then perform the affective component of empathy and respond in a manner that addresses the other person's mental state. The response cannot be just any

response but must be an *appropriate* response to the person's thoughts and feelings. In short, affective empathy is the social component of empathy.

In contrast, systemising is proposed to be a strength of autism. Systemising is the ability to construct and assess systems. A system is loosely defined as anything that follows a set of rules. Autistic people are proposed to be particularly good at identifying the rules that govern a system. Such a capacity for rule identification, is posited to allow autistic people to predict how a system will behave.

Identifying a penchant for systemising or a deficiency in empathy does not mean that a person is autistic. Instead, autism lies in a discrepancy between the two. It is the disparity between empathy and systemising abilities that is the hallmark of autism. According to the theory, the larger the discrepancy the more likely a person is to be autistic. If a person has a high capacity for systemising and a high capacity for empathy then they are not autistic, similarly if a person has an empathy deficiency but also a deficiency in systemising then they are not autistic. It is this discrepancy that sets autism aside from other disorders.

In short, E-ST proposes that the core characteristic of autism is a disparity between the skills of empathising and systemising. Empathising is measured as two skills, the first is cognitive empathy which is based on work on T.o.M., while the second is affective empathy, which is the response element. Systemising is the ability to recognise the rules that govern a system. An autistic person is expected to show an empathy deficiency while also showing a penchant for systemising.

Above is a brief overview of the E-ST. What follows is an attempt to delineate the assumptions made about communication and contextualisation in this body of research by focussing on a key E-ST paper from Simon Baron-Cohen.

5.5.2 Baron-Cohen – Autism: The Empathizing-Systemising (E-S)

Theory (2009)

In 2009 Baron-Cohen provided a review of the work done on E-ST, this review will be the focus of the close analysis. The review has been chosen instead of an initial paper on E-ST due to the complexity of the theory's literature. E-ST has its origins in T.o.M. and mind-blindness, early Baron-Cohen work on systemising (e.g. 2006), also including Baron-Cohen's "the extreme male brain theory" (see Baron-Cohen 2002 and Baron-Cohen 2003) and early work on affective empathy (Davis 1994). It was not until Baron-Cohen drew these papers together that E-ST was formed. Thus, it is hard to identify the ancestral roots of all aspects of this theory. So instead, Baron-Cohen's encompassing paper is the best way to engage with the theory. The paper performs a summary of all of the above papers, and they can be combined to form the theory in question. Consequently, it provides a platform upon which all future E-ST based autism research can be built. In short, while Baron-Cohen originally posited E-ST before the 2009 paper, it is the 2009 paper that forms the clearest grounds for discussion.

5.5.3 Empathising in Baron-Cohen (2009)

A point of initial interest in Baron-Cohen's review of E-ST, is the description of affective empathy, which hinges on the notion of *appropriate* response. No examples are provided for demonstration of what is appropriate. Presumably, it is assumed that an appropriate response to another person's sadness, is to demonstrate sadness and concern of your own to be comforting and supportive. As opposed to being dismissive, un-sympathetic or even enjoying the other person's sadness. Yet this is an entirely decontextualized notion of social appropriateness. Many scenarios

occur where other social responses are expected, for example a sports team defeating another sports team are expected to celebrate, even while the opposition commiserate. A medical or legal professional is often socially expected to distance themselves from the emotion of others and act logically to complete a task. More complex and nuanced situations occur, in which other people's sadness can be met with frustration, anger, relief and any number of emotions. There is no uniformity in responses and no inherently correct way to respond in any given situation.

If there is not this reciprocity of emotion, in which sadness must be met with concern, happiness with reciprocal happiness and so on, then who is the contextual gatekeeper of appropriateness? Who validates a responses appropriateness, and how is this measured for the diagnosis and analysis of autism? These questions remain unanswered by Baron-Cohen, there seems to be an unwritten assumption that appropriateness is inherently known by all that are present, and that autism practitioners are particularly adept at spotting inappropriate empathetic responses. To link this with the discussion of T.o.M., the practitioner must have superb cognitive empathy ability. The practitioner must:

1. Use T.o.M. to attribute the mental state of Person A.
2. Use T.o.M. to analyse which mental state is being attributed by Person B.
Thus, assessing for cognitive empathy. (Second order theory of mind)
3. Based on the observation in Step 1, identify the appropriate way to respond and compare this to the way Person B has responded.

Relying on the practitioner's ability to do all the above would require a theoretical basis that ensures uniformity in practice. However, this does not exist. Instead, there is no clear separation between cognitive and affective empathy. Different

practitioners who witness similar observable behaviour, can attribute this to either cognitive or affective empathy depending on their assumptions. To demonstrate this, the following hypothetical scenarios will demonstrate how it is the assumptions about the unobservable that drive conclusions about empathy, and not observable behaviour. In the first example, only observable behaviour is detailed:

Person A and Person B are in a room. Person A begins to cry. Person B begins to laugh.

This response would most likely be deemed inappropriate; but is this a failure of cognitive or affective empathy? The same scenario is written again three times below, but in these cases, hypothetical assumptions about unobservable cognitive processes have been added (bold). The conclusions of these assumption have also been added (brackets):

Person A and Person B are in a room. Person A begins to cry. **Person B recognises that Person A is sad and wants to do something to cheer them up.** Person B begins to laugh. (Person B has reacted inappropriately but did attribute the correct mental state. Failure in affective empathy)

Person A and Person B are in a room. Person A begins to cry. **Person B believes that person A has found something funny.** Person B begins to laugh. (Person B attributed to wrong mental state, but did react in an appropriate way to the state they attributed. Failure in cognitive empathy)

Person A and Person B are in a room. Person A begins to cry. **Person B recognises Person A is sad. Person B dislikes Person A.** Person B begins to laugh. (Attributes correct mental state. Chooses to react counter to appropriateness based on prior relationship. No failure?)

Person A and Person B are in a room. Person A begins to cry. **Person B, not noticing this, sees a funny clip on the television behind Person A.** Person B begins to laugh. (No failure in terms of empathy).

Each of these examples is entirely hypothetical and are designed to show how much depends on the practitioner's interpretation of the unobservable. It is the things that the practitioner cannot see that drives the outcome, yet this point is largely ignored, and the practitioner's conclusions are treated as objective science. The methodology does not allow for the margin of error when there is no manner of analysing cognitive process without delving into unobservable phenomenon. Consequently, the conclusion pertains more to the inclination of the practitioner, than it does to 'Person B'.

5.5.4 Systemising in Baron-Cohen (2009)

Systemising is described as “the drive to analyse or construct systems – any kind of system.” (Baron-Cohen 2009 p.7). A system defined as anything that follows rules. Systemising is therefore “trying to identify the rules that govern the system, in order to predict how that system will behave” (Baron-Cohen 2006, Baron-Cohen 2009). Baron-Cohen, in his account of E-ST, lists several different types of system (2009 p.8):

- Collectible systems (such as distinguishing between different types of stones)
- Mechanical systems (such as a video recorder or a window lock)
- Numerical systems (train timetables or a calendar)
- Abstract systems (the syntax of language or musical notation)
- Natural systems (weather patterns and tidal patterns)
- Social systems (management hierarchies, dance routines etc.)

- Motoric systems (throwing a frisbee or bouncing on a trampoline)

These systems all, allegedly, rely on the notation of a regular structure and rules that allow them to operate. Baron-Cohen (2008 p.63) breaks this process down into steps too:

“The rules tend to be derived by noting if A and B are associated in a systematic way (e.g. the musical note E is always five tones above the musical note A; or in 1995 the Car of the Year was a Fiat Punto). A second step in systemizing is to consider if the evidence allows you to conclude that A causes B (e.g. turning this electrical switch to the Up position causes this light to go on; or moving the Ayesha hydrangea from acidic to alkaline soil causes its colour to change from blue to pink).”

The concept of rules is central to the process of systemising but what are rules?

Some of the examples follow rules of science such as the identification of different types of stone. But others apparently don't follow such rules. Dance routines or the syntax of language for example, each follow rules that are frequently broken in the name of style. Or rules that change, are disputed or ignored. The rules are not as cemented as the laws of physics, instead they are social abstractions. It can be argued that the laws of syntax are just as defined and rigid as the laws of physics, they are documented, and many recognise a “correct syntax”, but in use these laws are not a steadfast. Treating “rules” with a blanket understanding, and consequently the categorisation of systems, leads to inconsistencies that blinker the researcher's view of autism.

Returning to the definition of systemising provided by Baron-Cohen: “the *drive* to analyse or construct systems” (italics added), there is an undertone of innateness behind the process. Systemising is a “drive”, it is something that humans, and

apparently to a greater extent autistic people, innately and naturally do. Arguably then, the human's drive to systemise, must coincide with a world that is naturally full of systems, or at least a world that is naturally full of elements that a human can systemise. On the surface, this may appear to be a reasonable claim, especially when such a statement is posited in the fields of mathematics or science (not that there is no debate in these areas either). But such assumptions have consequences in Baron-Cohen's work; Baron-Cohen's is portraying autism in a communicative society which is governed by systems. Nowhere is this more obvious in the notion of "appropriate" empathetic responses, there is system of communication which must be adhered to. Later, the systemised and codified philosophy of language found in these papers will be discussed, this too is present in this systemised manner of thinking. Communication to Baron-Cohen is a systemised and rule bound process rather than a fluid and creative process. Baron-Cohen over-extends the systemised nature of the world.

Autistic people are argued to be particularly good at accessing, predicting and analysing these systems, making the inclusion of social systems of note. If autistic people possess a superior ability to access a social system, then how can there be a trademark autistic social deficiency. An answer to this question lies in Baron-Cohen's answering of another question. In Baron-Cohen's summary, he addresses the question of whether strong systemising ability is also present in "low-functioning" autistic individuals. Baron-Cohen answers that it is, and that "many of the classic [autistic] behaviours can be seen as a reflection of their strong systemising" (2008 p.8). Baron-Cohen gives many examples of systemising and what behaviours it can explain (ibid):

Sensory Systemising	<ul style="list-style-type: none"> - Tapping surfaces, or letting sand run through one's fingers - Insisting on the same foods each day
Motoric Systemising	<ul style="list-style-type: none"> - Spinning round and round, or rocking back and forth - Learning kitting patterns or a tennis technique
Collectable Systemising	<ul style="list-style-type: none"> - Collecting leaves or football stickers - Making lists and catalogues
Numerical Systemising	<ul style="list-style-type: none"> - Obsessions with calendars or train timetables - Solving maths problems
Motion Systemising	<ul style="list-style-type: none"> - Watching washing machines spin round and round - Analysing exactly when a specific event occurs in a repeating cycle
Spatial Systemising	<ul style="list-style-type: none"> - Obsession with routes - Developing drawing techniques
Environmental Systemising	<ul style="list-style-type: none"> - Insisting that toy bricks are lined up in an invariant order - Insisting that nothing is moved from its usual position in the room
Social Systemising	<ul style="list-style-type: none"> - Saying the first half of a phrase or sentence and waiting for the other to complete it

	<ul style="list-style-type: none"> - Insisting on playing the same game whenever a child comes to play
Natural Systemising	<ul style="list-style-type: none"> - Asking over and over again what the weather will be today - Learning the Latin names of every plants and their optimal growing conditions
Mechanical Systemising	<ul style="list-style-type: none"> - Learning to operate the VCR - Mending bicycles or taking apart gadgets and reassembling them
Vocal/Auditory/Verbal Systemising	<ul style="list-style-type: none"> - Echoing sounds - Collecting words and word meanings
Systemising Action Sequences	<ul style="list-style-type: none"> - Watching the same video over and over again - Analysing dance techniques
Musical Systemising	<ul style="list-style-type: none"> - Playing a tune on an instrument over and over again - Analysing the musical structure of a song

When answering the question of why superior systemising does not result in superior communication, it would be acceptable to argue that socialising is not built upon a system. Yet Baron-Cohen's examples show that this is not considered to be the case. Instead, Baron-Cohen appears to have divided the social experience up across at least two systems. The first is social systemising, which relates to the

interpersonal element of socialising. Social systemising seems to include the verbal and the non-verbal, the linguistic and the non-linguistic. In Baron-Cohen's example, this includes linguistic practises (bullet point one) and routine play (bullet point two). The categories for belonging to this system are not outlined. It could be argued that the verbal element has more in common with the second socialising system, "vocal/auditory/verbal systemising". Here are two more bullet points, the first which encompasses the stereotyped autistic behaviour of echolalia (the meaningless repetition of sounds, words or phrases) and the second is the collecting of words and word meanings. Again, these two behaviours have little that unite them under one system. The first pertains to language use, whereas the second pertains to the collection of language as a knowledge. One seemingly exists only is communication, whereas the other is stored and exists independent of its usage.

There is no justification for the categorisation of behaviours under each system. To go further, there is little to justify that each behaviour is the result of a system at all. Arguably, the abstract notion of language most easily lends itself to systemising. In fact, language impacts in many of the other systems described, for example "learning the Latin names of every plant" in natural systemising," saying the first half of a phrase or sentence" in social systemising and, of course "collecting words and word meanings" in vocal/auditory/verbal systemising. Evidently, Baron-Cohen views language as the collection of words and their attached meanings. Language to Baron-Cohen is a set system, and not a contextual creative process. Baron-Cohen views systemising as "noting regularities (or structure) and rules. The rules tend to be derived by noting if p and q are associated in a systematic way (e.g. if p, then q)". When Baron-Cohen introduces language as a system he is stating that a word and

meaning are associated. To map this premise on to Baron-Cohen's simplistic equation:

if p (somebody says cat) then q (they are referring to the small, hairy creature that
says meow)

Evidently, Baron-Cohen is subscribing to a post-sausurrean codified model of language. The principles of systemising rely on this perspective of language if the theory is to be able to discuss autistic language use at all.

Language aside, Baron-Cohen also has a narrow view of communication in general. Socialisation and communication are very much limited to the linguistic and the exchanging of meanings. There is no discussion of other recognised elements of interaction, contextualisation, turn-taking, gesture, social cues and so forth.

There are some indications of one other element of social communication that is pervasive in Baron-Cohen's work and that is appropriateness. Appropriateness has been discussed in relation to affective empathy above. Perhaps, the crux of the flaw in Baron-Cohen's work is to fail to determine both the elements of appropriateness and systemising yet the two seem to be linked. For something to be deemed categorically appropriate or inappropriate there must be rules to dictate social appropriateness. If appropriateness relies on the rules, then appropriateness is a system. If it is a system, then autistic people must be able to predict it. If an autistic person can predict it, then why is there the deficit in affective empathy? Baron-Cohen creates a paradox, if affective empathy and appropriate responses are rule bound, therefore it is a system, if it is a system then autistic people must be good at it, yet if an autistic person is good at it, they cannot be autistic.

To further understand this notion of appropriateness, it is possible to turn to pragmatic linguistics. Appropriateness is not defined, but from the context in which it is used, it seems to share many similarities with the co-operative principles and maxim flouting offered by H.P. Grice 1975. Grice's work slightly precedes Baron-Cohen's forays into autism, but certainly Grice's work was influential enough to begin to impact on understanding of communication across the disciplines. Grice posits four maxims (later extended to five by some linguists to include politeness, another area which has become of interest in autism research), these maxims are adhered to by participants in interaction to co-operatively participate with one another. The maxims referred to are from Grice's Co-Operative Principle. The maxims are Quality, quantity, Relation and Manner.

1. **The maxim of quantity**, where one tries to be as informative as one possibly can, and gives as much information as is needed, and no more.
2. **The maxim of quality**, where one tries to be truthful, and does not give information that is false or that is not supported by evidence.
3. **The maxim of relation**, where one tries to be relevant, and says things that are pertinent to the discussion.
4. **The maxim of manner**, when one tries to be as clear, as brief, and as orderly as one can in what one says, and where one avoids obscurity and ambiguity.

Grice offered no quantified amount for the management of these principles. Instead, these maxims are socially managed and deemed "appropriate". Baron-Cohen makes no reference to Grice or to the co-operative principle, but the similarities are compelling. Each relies on some notion of appropriateness, that is simultaneously quantified to the point of theoretical discussion, but also socially managed in

practice. While the theories rely on social interactions reflecting their categorisation of events, they paradoxically also rely on social interaction to manage this categorisation while not venturing beyond it.

Both rely on a rule bound system, that is simultaneously fluid and negotiable. There is evidence in Baron-Cohen's work that the systemising of social interaction is seen to lead to maxims being flouted:

- "Saying the first half of a phrase and waiting for the other person to complete it" – flouting of maxims of manner and quantity (saying too little and not in a manner that avoids obscurity and ambiguity).
- "Insisting on playing the same game whenever a child comes to play" – flouting the maxim of relevance (play is not pertinent to present situation, instead it is rooted in previous interactions)
- "Asking over and over again what the weather will be today" - flouting the maxim of quantity (question repeated beyond point of information) and the maxim of relevance (constant repetition does not keep the question pertinent to the conversation)
- Echoing sounds – flouting the maxim of relevance (constant repetition does not keep the sound pertinent to the conversation)

The above analysis is not done to construct a theory of the co-operative principle in autism deficiency. Nor is engagement with Grice is the aim of this section. Instead, the above demonstrates the similarities between Baron-Cohen's appropriateness-based theory, and existing linguistic theory at the time.

Conclusion

E-ST, much like weak central coherence theory, proposes a different innate cognitive style. See the discussion of modularity and nativism in WCCT and those points also apply to E-ST. Both construct a compartmentalised, non-holistic view of the autistic mind, which selects tools for certain tasks. However, E-ST contradicts the central component of WCCT. While both posit a specific attention to localised detail, E-STs systemising requires the skill of placing these details into a larger system, which is the very skill that WCCT posits as the point of the central autism deficit.

E-ST builds upon the principles of T.o.M. and therefore also develops the assumptions about communication. By introducing systemising to autistic communication and language use, Baron-Cohen has fully subscribed to a model of interaction as rule bound, fixed and non-creative.

E-ST relies on the principles of systemising and empathy, Baron-Cohen's summary of systemising relies on the concept of rules, rules are poorly defined and inconsistent across the various systems. Empathy relies, in part, on appropriateness, a concept that has received little attention. When the practitioner utilises E-ST, a central question will have to be "was that response appropriate", there is no guidance on how to answer this question. The practitioner will have to judge appropriateness based upon their own experiences, therefore making themselves the measuring stick for comparison against which autism is judged. Different practitioner, different results. These limitations are not addressed in the literature.

Chapter 6: Towards an Integrationist Future of Autism

Research

6.1 Introduction

The purpose of this final chapter is to explore a future of autism research that does not fall into the same assumption bases of the works discussed in previous chapters. To do so, this chapter will introduce Integrationist Linguistics, a radical linguistic epistemology, and propose its value in autism research. To do so, there will be a summary of the integrationist epistemology and examples of how it can provide new insight into the autistic experience. Finally, a very brief discussion will be provided of Participatory Research and the way Integrationist Linguistics may complement these principles.

Many of the critiques of autism research in previous chapters are critiques which the align with the integrationist perspective. These critiques will be expanded upon using integrationist literature over the coming chapter. The purpose of this thesis is to begin the conversation of Integrational Linguistics in autism research. Not every question can be answered, and not all angles explored. The purpose is just to establish a platform from which the field can proceed in this direction.

6.2 Integrationist Linguistics: A Rough Guide

6.2.1 Introduction

Much of this thesis has been focussed on addressing the communicative assumptions behind autism research and exposing the lack of linguistic theory

behind many theories of autism. Thus, the linguist would appear to be well placed to contribute towards the field. Certainly, the involvement for any linguistic theory would represent progress within the field.

Yet traditional linguistics will still be limited in its ability to contribute. Many of the fallacies in theories of autism are shared in the mainstream school of linguistics. Integrationist Linguistics is naturally critical of traditional linguistics, and challenges many of the pre-conceptions within it. Through proposing Integrationist Linguistics, it is natural to have to provide a critique of traditional linguistics. The remainder of this chapter will highlight the limitations of traditional linguistics in representing true change and highlight the areas in which Integrationist Linguistics will be of more benefit in representing a shift towards participatory autism research.

First, an overview of the Integrationist philosophy will be provided, which quickly covers the core papers and central philosophies. The purpose of this section is not to provide a description of integrationist thought in its entirety, as this is beyond the scope of this thesis. Instead, it is to introduce the integrationist tools that this thesis argues research needs to be equipped with to progress the current understanding of autism .

Next will be a brief discussion of past integrationist discussions of autism. The integrationists are yet to contribute heavily to the field, but this thesis would be amiss if it weren't to acknowledge the brief crossovers that have occurred.

Finally, the argument will be put forward for the adoption of an integrationist perspective of language in future autism research. A full discussion of the benefits and limitations of the integrationist perspective for the study of autism will be presented.

Integrationist Linguistics owes its origins to the former Emeritus Professor of General Linguistics at the University of Oxford, Roy Harris. Harris' work, and the consequent work of those influenced by Harris, is concerned primarily with the fundamental questions that arise when trying to understand communication and language (Pable and Hutton 2015 p. 1).

Orman writes that the “philosopher who openly rejects the very possibility of the academic disciplines they philosophise about are something of a rarity” (2017 p.313) yet that is what Harris’ work is. It is first and foremost a critical perspective of the linguistics that came before it. It challenges many of the assumptions that are so far embedded in traditional linguistics, that they have previously gone largely unchallenged.

The school of linguistics that Harris challenges is referred to as “segregationist linguistics”. Segregationist Linguistics stems from the seminal 1916 work “Course de Linguistique General” by Ferdinand de Saussure. Saussure laid the groundwork for the western intellectual traditional of linguistic thought still pervasive today and which permeates through much of all linguistic research today.

Such is the influence of Saussure, that Harris’ term “segregationist linguistics” is incredibly broad. The term refers to almost all work in the field of linguistics between Saussure and Harris’ work, and the majority of work post Harris too. But segregationism isn’t confined just to linguistics but permeates to all fields that concern themselves with communication such as philosophy, psychology, and anthropology. Through this work it will be seen to impact as far spread as medicine, education, and scientific disciplines. It covers almost every school of thought of language and communication post-Saussure.

What unites these varied disciplines under the term “segregationist” is a shared language myth. A language myth that permeates all western linguistics, and it is this myth that Harris sought to expose and challenge. Thus, integrationist linguistics was constructed as a counter epistemology to segregationist linguistics. The myth, which is discussed in more length below, is the belief that language can be segregated from its usage.

Therefore, the introduction to Integrationist Linguistics provided below must introduce concepts from Segregationist Linguistics. To date, Integrationist Linguistics has been primarily oppositional, therefore it is impossible to discuss it in isolation from that which it opposes. The description below is broken down into broad sub-headings to aid with providing a comprehensive discussion. The sub-headings will attempt to break the integrationist perspective into digestible individual points. Yet it is to be acknowledged that these points cannot be so easily divided, and that wider integrationist philosophy identifies much crossover between them.

The wider implication of integrationist philosophy will be touched upon throughout this thesis, as the language myth extends way beyond the field of linguistics.

However, during the introduction of integrationist linguistics the focus will be primarily on the field of linguistics as:

"While it [integrationism] deals with many topics that concern psychologists, anthropologists, semioticians and philosophers... integrationism has its immediate origins in dissatisfaction with the answers that linguistics has provided to fundamental questions" (Pable and Hutton 2015 p.xvi).

6.2.2 Integrationist vs Segregationist: The Fundamental Difference

The term “integration” refers to the integrationist's approach to meaning-making and communicative action. The integrationist understands communication as being an activity in the present which is integrated with a participant's past and anticipated future. The communicative act is not an isolated incident. The act of integration is the act "in which we respond to events and actions in the immediate present, but which are inseparably bound with our individual and shared experiences as communicators" (Pable and Hutton 2015 p.23).

Harris (2008 p.111 cited in Pable and Hutton 2015 p.22-23) lays out four ways of integrating that are part of human existence:

"Living, if I am right, is a process of integration... One [type of integration] is integration of one's own activities with those of others. Another is the integration of those activities with the physical world in which we all have to find - if we can - food and shelter sufficient to sustain ourselves and our families from day to day. A third is the integration of verbal with non-verbal communication ... There is a fourth mode of integration that is tacitly implied in all this, but which I have not so far mentioned. Everything we do as human beings involves the integration of the present with the past and the future: this is temporal integration."

1. Temporal Integration

Communicative acts do not happen in a temporal vacuum, instead they are integrated with a person's past and their anticipation of the future. The understanding of a sign is determined by its temporal situation. As described by Pable and Hutton temporal integration is the act “in which we respond to events and actions in the

immediate present, but which are inseparably bound with our individual and shared experiences as communicators" (2015 p.23).

2. Integration of Our Own Activities with the Activities of Others

The idiosyncratic nature of integration means that two different people, upon hearing the same sign, can arrive at totally different meanings. Therefore, communication is processing towards a joint communicative goal. Harris summarises this by stating that in the majority of interaction we "are trying to integrate [our] own activities with their, or they are trying to integrate their activities with [ours] (2008 p.109).

3. Integration of the Verbal and Non-Verbal

Unlike other linguistic philosophies, integration does not revolve around the linguistic sign.[2] Verbal communication does not occur in isolation and it is situated within a context that also included the non-verbal. It is the integration of the verbal and non-verbal that is required to aid in the production of meaning.

While non-verbal includes the traditional mediums of non-verbal contact i.e. gesture, body language, gaze etc. it also includes the more abstract concepts, such as relationships. The relationship between interlocutors is usually "effected non-verbally" (Harris 2008 p.110) but the integrationist simply cannot ignore these non-verbal features in a discussion of meaning.

4. Integration of the Physical World

Integration is not limited to integrating the various actions of people, but also integrating the objects and environment around us: "such as knives, forks, motor

cars... equipment for daily living" (Harris 2008 p.109). These are the things that are often referred to as physical context in other epistemologies.

Meaning is created through these processes of integration, and through these processes alone. There is no external, non-integrated, non-contextual unit that carries meaning. There is no sign that can operate in isolation. Meaning is only possible through use.

Meanwhile, there is the segregationist linguistics. The segregationist can separate signs from the process of them being used. A linguistic unit can exist, and mean something, independently from its use. A cat is a cat. And that meaning and form are linked and that link exists without use. The act of segregation is what allows the segregationist researcher to act as an expert of instances of communication, more on this later. As Harris writes:

“to say that communication is intrinsically time-bound is to say that all assignments of meaning are made by time-bound agents. We have no alternative but to interpret particular episodes of communication by integrating them into the unique temporal sequence of events which constitutes our previous experience. Which in turn entails that where two or more participants are involved a message must be open to two or more interpretations. And these cannot be guaranteed to coincide. Furthermore, where they conflict, no one interpretation hold a privileged position vis-à-vis another”

(Harris, 1998, p. 84).

Here is the fundamental difference between integrationist linguistics and traditional (segregationist) linguistics.

Stemming from this challenge of the central principle of segregationist linguistics, a myriad of differences between the two approaches have evolved. Below are various points of difference between integrationist and segregationist epistemologies.

6.2.3 The Language Myth: Telementation and Determinacy

“Many people have assumed that when I talk about this being my language that means that each part of the video must have a particular symbolic message within it designed for the human mind to interpret. But my language is not about designing words or even visual symbols for people to interpret. It is about being in a constant conversation with every aspect of my environment” (Baggs, 2007, transcribed for this thesis).

As referred to in the introduction to this section, Harris’ work identified a language myth which permeates through and unites all segregationist linguistics. In short:

“The core of this myth is the proposition that what underwrites speech (and all other ‘cognitive’ forms of human communication) is the transference of identical ideas from sender to receiver.” (Harris 2009 p.15).

The process of transference is described via the dual concepts of telementation and determinacy. Telementation is the fallacy that "communication is a process of thought-transference from one person's mind to another" (Harris 1998 p.22).

Determinacy is the assumption that "the linguistic sign...associates a specific sound pattern and a specific concept" (ibid). The latter of these is essentially the belief that language consists of a fixed code.

Combined these two elements form what Harris terms "The Language Myth". The myth's constituent parts of telementation and determinacy help to perpetuate each other. This is well described by Pable and Hutton (2015 p.1):

“Briefly stated, that myth holds that linguistic communication involves the transfer or conveying of thoughts from one mind to another, and the related notion that languages achieve this by virtue of being ‘fixed codes’”.

The integrationist perspective directly challenges both assumptions. It rebukes the concepts of thought transfer (telementation) and instead posits that people "communicate with one another not by exchanging thoughts but by integrating their many activities" (Harris 2008 p.112).

Similarly, the integrationist rejects the concept of meaning making by a codified process. Instead the integrationist believes meaning making is a creative process, with each example being entirely idiosyncratic. People make meaning between them by integrating and co-coordinating different activities in real time. There is no “sign” that exists outside of this process of integration. Harris (1996 p.154) supports this process of integration with two axioms:

1. What constitutes a sign is not given independently of the situation in which it occurs or if its material manifestations in that situation,
2. The value of a sign (i.e. its signification) is a function of the integrational proficiency which its identification and interpretation presuppose"

Therefore there is no sign without context. The sign or word is not something that exists outside of the context of its use, "the integration or contextualization is the creation of the sign" (Pable and Hutton 2015 p.23). This is the crux of where integrationist and segregationist epistemologies differ. The removal of the sign from the context is impossible for the integrationist, whereas, as the name suggests, segregationists frequently remove the object of study from its context.

The furthest extent of the integrationist rejection of determinacy is to castoff language as a code and object of study entirely. Language does not exist independently from use, and cannot be of significance detached from use.

The constituent parts of the language myth are prevalent throughout linguistics research. Yet, it goes beyond just those who label themselves linguists. The language myth has permeated through to other areas of life. It is certainly prevalent in the autism works discussed throughout this thesis. It is also taught in schools, perpetuated in literature, and sub-consciously subscribed to by most other academic disciplines. In the words of Pable and Hutton (2015 p. xvi):

"While it [integrationism] deals with many topics that concern psychologists, anthropologists, semioticians and philosophers... integrationism has its immediate origins in dissatisfaction with the answers that linguistics has provided to fundamental questions."

Thus much of this discussion will be surrounding the field of linguistics. Yet sight will not be lost on the core focus, of what these beliefs mean for autism. The impacts of this language myth has gone largely unchallenged in the field of autism, and this analysis hopes to start the conversation of what happens to society's understanding of autism, if the language myth is challenged.

6.2.4 Challenging Linguistics Status as a Social Science

Among other factors, the assumptions of determinacy and telementation provide a basis for the scientific approach taken in traditional linguistics. While many contemporary linguists may happily relinquish the title of 'scientist', the stigma still exists in academic circles and many of the practices associated with a scientific

approach are pervasive. In fact, Saussure, the father of traditional linguistics wrote that “[l]inguistics has very close connexions with *other* sciences” (translated by Harris 1983 p.7) and that the “boundaries between linguistics and its neighbouring sciences are not always clearly drawn” (p.7-8).

The assumption of determinacy gives a referential framework upon which all observation can be based. Determinacy provides a concrete framework of meaning. At its most basic, it allows for the reduction of language and meaning to the simple formula of $x=y$ where x =form and y =meaning. There are some segregationist researchers who may object to this, as there is more scope for pragmatic meaning. Yet these researchers will still adhere to an underlying framework of prescribed meaning. Even if context is introduced, it is still introduced in a loose formula of $x+z=y$, where Z =context or some other factor. Essentially, segregationist linguistics allows the researcher to be a scientific expert, capable in some way of calculating meaning within data.

Meanwhile telementation allows for a similarly scientific analysis of how this meaning transfer takes place. Going back to the roots of segregationist linguistics, Saussure constructed his talking heads model:



Of this process Saussure wrote that:

"the starting point of the circuit is in the brain of one individual, for instance A, where facts of consciousness which we shall call concepts are associated with representations of linguistic signs or sound patterns by means of which they may be expressed. Let us suppose that a given concepts triggers in the brain a corresponding sound pattern. This is an entirely psychological phenomenon, followed in turn by a physiological process: the brain transmits to the organs of phonation an impulse corresponding to the pattern. Then sound waves are sent from A's mouth to B's ear: a purely physical process. Next, the circuit continues in B in the opposite order: from ear to brain, the physiological transmission of the sound patter; in the brain, the physiological association of this pattern with the corresponding concept. If B speaks in turn, this new act will pursue - from his brain to A's - exactly the same course as the first, passing through the same successive phases"

(Saussure translated by Harris 1983 p.9)

The process of communication in the talking heads model can be broken down into 7 main parts:

1. The Sender
2. The Receiver
3. The Message
4. The Code
5. The Encoding Process
6. The Transmission
7. The Decoding Process

Consequently a miscommunication can be scientifically backtracked through this process, to identify the component that is at fault. Communication is a scientific process. The talking heads model can be used to describe all communication past, present or future. It provides that underlying stability for scientific enquiry. An overarching model of what communication is.

For a consequent approach to Saussure there are several famous examples and variants. John Locke's *Essay Concerning Human Understanding* is a popular example of telementation. Furthermore, although neither researcher in a linguist, the formulaic process of Shannon and Wever's model of telementation is an excellent example (1948):

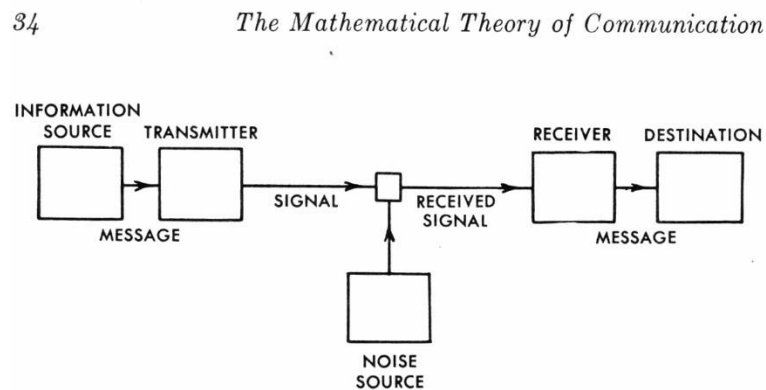


Fig. 1. — Schematic diagram of a general communication system.

The model is not included here for any great analysis, but is instead included as perhaps to most clear example of reducing the communication process to a science. A researcher here can as simply break down communication, and perceived miscommunication, into a flow chart to scientifically analyse what happened. In the event of a perceived miscommunication, the researcher can as clearly examine what went *wrong* as they can in analysing what went wrong is a computer code. The researcher is in the place of having clear scientific expertise.

There is something else missing from both the Talking Heads and Shannon and Weaver model of communication, and that is *thought*. Thought is non-interactive, it is entirely personal, unobservable, and unshared. It is self-communication (see Harris 1998, p.29).

The sender-receiver based models above neglect thought during the process:

“It is one of the blatant ironies of the sender-receiver model that although telementation plays a key role in defining the criteria for initial and terminal states of the communication process, nevertheless thinking is systematically excluded from the process itself. It can occur ‘before’ and ‘after’ but not ‘during’... communication”
(Harris 1998, p.29).

A scientific model of language will, by necessity, either entirely ignore thought, or attribute best guesses as to the thought process based on observable behaviours. It cannot observe thought directly. Yet to include an unobservable part of the process, in thought, would be to admit that no completely scientific observation of communication can take place. Unless, that is, the researcher believes themselves qualified to base their conclusions on thought on their own observations and interpretations.

A further hallmark of a scientific approach, is the assumption that observation of one instance of a phenomenon, can provide information on all other instances of the same phenomenon. For example, the observation that one plant uses sunlight, water and carbon dioxide and creates oxygen and sugar, tells the observer that other plants will follow the same process of photosynthesis. Once this is established, the

researcher can draw the conclusion that every living healthy plant is following the same process.

Treating linguistics as a science, therefore, requires the researcher to observe and instance (or finite number of instances) of communication, and by able to draw assumptions about all of communication. It is the onto-methodological assumption that the study of a finite number of instances can yield any over-arching conclusions about an entire phenomenon. Philosopher Ludwig Wittgenstein, while obviously not an integrationist, referred to this as the “craving for generality”:

“Our craving for generality has [as one] source ... our preoccupation with the method of science. I mean the method of reducing the explanation of natural phenomena to the smallest possible number of primitive natural laws... Philosophers constantly see the method of science before their eyes, and are irresistibly tempted to ask and answer in the way science does. This tendency is the real source of metaphysics, and leads the philosopher into complete darkness. I want to say here that it can never be our job to reduce anything to anything, or to explain anything. Philosophy really is “purely descriptive.” (Wittgenstein, 1958)

The integrationist shares Wittgenstein’s rejection of generalising when it comes to language. The linguist, is a philosopher, not a scientist. The linguist cannot take any interaction, and draw any conclusions about others interactions. The perspective described is not new, Saussure himself posits that:

"Other sciences are provided with objects of study given in advance, which are then examined from different points of view. Nothing like that is the case in linguistics. Suppose someone pronounces the French word nu ('naked'). At first sight, one might

think this would be an example of an independently given linguistic object. *Rather, one might say that it is the viewpoint adopted which creates the object* " (Saussure translated by Harris 1983 p.9 emphasis added).

Yet the linguistic practice of taking data from one interaction, and applying the conclusions to wider contexts is rife in the overwhelming majority of linguistic methodologies. The integrationist does not support this practice, and moves away from the extension of conclusions beyond the context of use.

The rejection of these fallacies shakes the foundations upon which the scientific approach to linguistics is built. The integrationist's dynamic understandings of sign and meaning, coupled with entirely the idiosyncratic concertation of contextualisation essentially removes the linguist from the role of "language expert" and instead creates an essentially lay-orientated epistemology.

There is no longer any over-arching theory, or all-encompassing model or answer to the field of linguistics. There is no longer a model upon which to build a scientific approach. The role and expertise of the linguist is inherently challenged by the integrationist perspective.

Instead of being a scientist, the integrationist is just interested in the unique processes of integrating signs. It is at this point that an integrationist approach so radically deviates from its scientific linguistic contemporaries. The integrationist accepts this deviation and does not feel the desire to definitively answer the question of what was meant. What is of interest to the integrationist is how the different meanings are integrated with each other.

There are two axioms, constructed by Harris, that the integrationist needs to consider when discussing the process of integration:

1. What constitutes a sign is not given independently of the situation in which it occurs or of its material manifestations in that situation
2. The value of a sign (i.e. its signification) is a function of the integrational proficiency which its identification and interpretation presuppose

(1996 p.154).

There is no sign without context. The sign or word is not something that exists outside of the context of its use: "the integration or contextualization is the creation of the sign" (Pable and Hutton 2015 p.23). This is the crux of where the integrationist and segregationist epistemologies differ. The removal of the sign from the context is impossible for the integrationist, whereas, as the name suggests, segregationists frequently remove the object of study from its context.

Perhaps one of the papers that best addresses the rejection of the linguistic science is John Orman's paper "Theorised to Death: Diagnosing the Social Pseudosciences" in 2018, which revisits "Explanation and Human Action" by A.R Louch (1966). Orman's purpose in revisiting this paper is to explore the rationale behind the "social sciences", and to attempt to challenge this categorisation.

Orman opens by acknowledging that philosophers rejecting the very possibility of an academic discipline are often ignored or sidestepped (p.313). Yet also indicates that "some of the most radical... theories to have emerged from those fields of enquiry concerned with human doings and society are those which reject the possibility of a scientific account of their subject matter" (ibid). Yet this is not a pattern mirrored in

natural sciences, there are no scientists “falling into disrepute or controversy for advocating the superiority of lay or ad hoc accounts of photosynthesis.” Meanwhile, in social sciences, researcher’s spend much time and effort defending the scientific treatment of human actions.

The original paper from Louch makes the damning claim that behavioural and social sciences are impossible: “[m]y main intent has been to show that the idea of a science of man or society is untenable” (Louch 1996, p.viii in Orman 2018 p.315). Louch does so by rejecting “any explanation of agentive behaviour... which rests on an appeal to generalities or generalisations” (Orman 2018, p.315). Louch is rejecting over-arching theories of human behaviour. Instead Louch argues that the only way to describe human behaviour is ad hoc, context bound, and without any over-arching theory attempting to extend explanation beyond the individual case. Orman selects the following quote from Louch to summarise this point:

“In daily life we succeed in accounting for our actions without recourse to general theories or statistical regularities [...] A student in my office reaches for a cigarette and matches, he strikes a match and lights the cigarette, inhales and exhales the smoke. It would not occur to me to accompany this set of observations of his actions with further comments designed to explain what he did. If I had to do so, I should appeal to his reaching for a cigarette as indicating a desire to smoke, and the rest of his actions as contributing to the same end. It would not occur to me or to my interlocutors to offer or demand general laws from which this action can be shown to follow, or regularities of which the connexion of this action and its motive would be an instance.” (Louch 1966, p. 1 in Orman 2018 p.316)

There are many parallels between Louch's view and the integrationist view laid out above. Primarily the rejection of the linguistic expertise, the movement towards the lay perspective, and the tendency to move away from grand over-arching theories. Louch's work primarily focuses on sociologists, psychologists, and some anthropologists, but Orman has "no doubt" that linguistics and semioticians would be deemed "ripe for similar treatment" (ibid). Louch describes most philosophers and social scientists as "inveterate generalizers and criterion-mongers" (Louch 1966, p.2 in Orman 2018, p.316). A modus operandi of these approaches is over extending conclusions about an event beyond the instance in which the event occurred. Orman selects the following quotes to emphasize this (Orman 2018 p.217):

"Behavioural scientists are forced into a mistaken view of their subject-matter as a result of their preoccupation with a method they take to be necessary to any respectable inquiry" (Louch 1966, p.5).

"[...] conception of methodology has prevented sociologists and psychologists from offering significant accounts of human behaviour [... M]ethodology leads only to formulae for possible theories, but not to any genuine accounts of human behaviour.

A sterile scholasticism has possessed the behavioural sciences, for which philosophers with their theories about the nature of science are very much responsible" (Louch 1966, p. 6).

"[...] redundancy and platitude are the consequences of typical attempts to apply wholesale the techniques of the natural sciences to explanation of human behaviour" (Louch 1966, p. 39).

Orman continues to provide examples of this outlook, and the redundancy of some of these social science conclusions. One such example is a study from Ryan et al in 2010, who found people to be in a better mood at a weekend, before concluding that this was because they have more freedom at the weekend. Naturally this is an over-simplified summary of the conclusion as it was written in the paper that Orman has provided. Yet it serves to demonstrate another hallmark of these pseudo-scientific papers, which is jargon:

“in this case such proof consists in dressing up something that we either arguably already know or may even see fit to dispute in a barrage of statistics, path diagrams, and less than perspicuous terminology” (Orman 2018, p.318).

More on this in relation to autism will be considered later in the chapter, but the parallel between what Orman describes and autism researcher is irresistible. The jargon used to explain autistic behaviour, in a scientific manner, distances autistic behaviour from human behaviour. There must be new jargon attributed to endless new theories that are created just to describe the way another person is behaving.

The extensive use of jargon has been something that the present thesis is conscious of. Louch and Ormon make the point that is the purpose of theories is to help us understanding events and phenomena better, then extensive jargon defeats this purpose. Louch writes (p.14 in Ormon 2018 p.319) that: “I do not know why such simpler formulations will not do in place of the bewildering complexity, unless it is that the terminological display clouds the paucity of information” (p.319). Orman adds that often readers can only access the theory being proposed, through contextualisation with their own ordinary, pre-theoretical experiences (p.319). Jargon is a pillar propping up the pseudo-scientific nature of the social sciences, and that is

the purpose for its continued use. It does not add clarity, or offer information beyond what simpler language is capable of.

Methodologically, in social sciences, the researcher works hard to move away from the lay / ad hoc perspective. Instead the researcher must rely on a process of description and explanation. In autism research, this often takes the shape of observing autistic behaviour, and then explaining it through the lens of central deficiency.

The distinction of the lay perspective is not simplistic. Clearly it is not possible simply to say that a lay person is anybody who has not studied language beyond GCSE, or A-Level, or University. None of these definitions would satisfactorily separate a lay person from a person with research experience. In this age of information there are books, podcasts, documentaries and more that pertain to the study of communication, the line between those who have researched, and those who have not, is more blurred than ever before.

It is commonly accepted that communication is something that everybody participates in. Yet it is not as commonly accepted to state that everybody studies communication. The integrationist, however, believes this very thing claiming that “everyone is a linguist”. The integrationist recognises that everyone asks “what do they mean”, thus everyone is to some extent studying language. The “lay-person” will still use reflexive terms such as “grammar”, “meaning”, “word”, and so on. Traditional linguistics is merely an extension of these lay practices. Nigel Love summarises that:

'linguistics started the moment human beings started to get to grips with their first-order linguistic experience, the ratiocinations of latter-day language experts being essentially continuous with that process' (Love, 1990, p. 114).

Clearly then, the definition of "lay" and "researcher" or "expert" in language cannot be broken down into the binary nature of "those who have studied language" and "those who have not". Everybody studies language informally as part of everyday interaction. Language is also one of the most basic components of western formal education from the youngest of ages. Everybody will have been exposed to some form of the language myth. So, at what point along this continuous process of studying language does an individual transition from "lay" to "researcher" or "expert"? This is a question that cannot be given a definitive answer.

From an integrationist perspective, the distinction is broadly moot. Harris writes that:

'A linguistic theorist speaks with no greater authority and insight about language than a baker or a bus-conductor' (1997, p.237).

Everybody, the linguist and the bus-conductor, engages in linguistics and metalinguistic practices. Everybody has their own context-bound understanding which is embedded in whatever linguistic experience has come before. Their experience will almost certainly include some level formal study of language and communication, but it will also include their ongoing and ever developing lived experience also. The aim is not to binarily lay from expert, but to recognise that each person exists between the two, and thus there is no linguistic "expert":

"The meanings of words in an utterance or a text cannot be calculated or determined by any

formal analysis, and no amount of notational ingenuity can bring to interpretation a greater

degree of precision than that available to ordinary language users themselves.”

Pablé and Hutton (2015 p.13).

The advocacy in this thesis, and in wider integrational linguistics, for lay-orientation is more a move away from the self-perpetuating language myth which “flatters and reflects the type of culture which sponsors it” (Harris, 1981 p.vii), and move towards the lived experience.

Orman draws attention to other radical researchers, such as Wittgenstein, who has argued for “his repeated demand that philosophy do away with all attempts at explanation and concern itself solely with description” (p.320). Yet Louch takes this further, arguing that there is no description without appraisal:

“[t]he man or situation is not seen and then appraised, or appraised and then seen in distortion; it is seen morally. Value and fact merge” (Louch 1966 p.54 in Orman 2018 p.320).

Human behaviours can only be identified or described through the lens of another human and their appraising component. To argue that any discipline is outside of the lens of the individuals own experiences, and is totally “value-free” is to “fundamentally misconceive... [the] subject matter” (Orman 2018, p.321). Attempts to scientise these moral concepts are a fallacy. Yet social sciences must either find a way to categorise and control these variables, or ignore them entirely, if they are to continue to operate under the belief that they are indeed a science.

Finally Louch arrives at a point that is familiar to those that have read the integrationist critique above:

“Actions can only be judged in context and... there happens to be no universal context. Explanations of human action is context bound. This should not be surprising. Human conduct is a response to an incalculable variety of situations (p.207 in Orman p. 323).

Louch’s work runs parallel to that of Harris, which is why both Orman and the present thesis value it. It favours the removal of the linguistic expert, the instating of the ad hoc perspective, and the non-scientific treatment of human behaviour. Louch writes:

“there is no call for the specialist in the normal understanding of the social game. We are all players, and to this extent we are all, to varying degrees, experts. This seems to me the consequence of the view that language is social, that it is bound up with the actions of men, that language and act, utterance and context, cannot be separated” (Louch p.216 in Orman p.325).

The revisiting of Louch by Orman demonstrates a long standing call for a reassessment of the social sciences. In the present thesis it is used to further strengthen the integrationist’s dismissal of the scientific nature of enquiry in linguistics, and by extension autism. Harris, Orman, Louch provide a wide range of discussion which questions the methodologies of the social sciences and which will have implications in the discussion later in this chapter.

It is not to say that only the integrationist recognises this pattern in human sciences. Saussure himself wrote of linguistics that:

"Other sciences are provided with objects of study given in advance, which are then examined from different points of view. Nothing like that is the case in linguistics. Suppose someone pronounces the French word *nu* ('naked'). At first sight, one might think this would be an example of an independently given linguistic object. *Rather, one might say that it is the viewpoint adopted which creates the object*" (Saussure translated by Harris 1983 p.9 emphasis mine).

But this is not an argument that is regularly introduced in human sciences. Too often the object of enquiry is taken for granted. Just as the astrologer never questions the philosophical nature of the stars, or the botanist never has to justify the existence of the plant, the linguist must not question the existence of the linguistic object. Hence the need for works such as Louch's, Orman's, and Harris'.

6.2.5 Lay-Oriented Linguistics vs. Linguistic Expertise

Once the researcher's position as an expert is challenged, the lay perspective is strengthened. The integrationist perspective is that any linguistics worth having will be "essentially lay-orientated" (Harris, 1981 p.90).

Ordinarily, linguistic research methodology requires "a devising of analytical criteria and procedures which will accurately distinguish between those properties of language which do, and those which do not, *matter* to the purposes for which language is used (Taylor 1997 p.4, emphasis original). Such a framework of criteria must exist to expose the "skeleton" of a language's structure. The researcher must know what the subject knows, must know "how they see language" (p.5). Only by doing so can the researcher begin to observe features of substance, "hence the struggle to devise analytical criteria/methods that can identify these properties." (ibid). It is the process and result of this struggle, which forms the basis

of the linguists' understanding of their field, and consequently it is this understanding that positions them as experts over the lay person. It is this expertise, this scientific approach to communication, that the integrationist rejects:

“the scientific study of language must redefine itself and give central attention to the normative character of language, not only so that it can avoid the charge of social irresponsibility, but also so that its analyses can have some correspondence to how linguistics agents themselves experience and makes sense of language” (Taylor, 1997 p.17).

There is a fundamental disparity between how the researcher sees and interprets language, and how the language users experience language. Arguably, nowhere is this more pronounced than in people with so called communication disorders or autism.

The argument above is against the elevation of the linguist to the level of expert. The removal of the linguist as the de facto expert, requires the elevation of the lay-perspective to answer questions. Harris writes (1998 p.145) writes:

“where there are linguistic facts available, it is the participants who are in possession of them. If a linguist wishes to have access to these facts, there is no option but to try to recover them from the participants.”

Here is one of the key points that will be made later for the relevance of integrationist linguistics in modern autism research. When talking about both linguistic and autistic experiences (which cannot be separated from one another), it is the lay perspective that takes primacy. Harris continues that:

“[o]ne of the greatest sources of confusion ever introduced into modern linguistics was the notion that the linguist, by employing the right professional techniques, can

somehow bypass the muddles and uncertainties that might beset the lay speaker and establish 'real' linguistic facts that none else – lacking the training of a linguist, is in a position to be aware of" (Harris, 1998, p.145-146).

Furthermore, and of great interest to the field of autism, is the rejection of conclusions that are based on language but claimed to pertain to mental processes that are "far beyond the level of actual or even potential consciousness (Chomsky, 1965 p.8 in Harris, 1998, p,146). Harris argues that if these mental processes are beyond consciousness, that the lay participant cannot possibly be aware of them. The integrationist does not accept these conclusions, which, considering many conclusions about the mental processes of autism are based on communicative behaviour, has a huge impact on the field. Harris writes that these processes:

"apart from being flattering to the ego of the linguist, are strategic attempts to steer linguistics from the domain of social studies into that of natural sciences" (ibid).

Linguistic fact must be found in "everyday linguistic communication by those who engage in it", and these people know which questions to ask if there is any doubt about what the facts are. That is because language does have a unique capability of being reflexive. Even other complex forms of communication do not have the ability to be reflexive.

Lay person questions about language, such as "what do you mean", can only be asked because the lay person has the metalinguistic devices necessary to ask them, and Harris believes that this is a long neglected area of discussion. The traditional linguist, and others, are simply taking the everyday metalinguistic practices, and reinterpreting them. This reinterpretation "merely diverts attention from the urgent

need for research into the way lay metalanguage articulates the second-order macrosocial abstractions that are called ‘languages’”.

Yet separating lay and research perspectives can also be problematic. Identifying who belongs in each category is not a well-defined process. What constitutes as linguistic expertise? Everybody has vast and unique experience of the process of communication. Everybody engages in meta-linguistic practices, such as asking questions like “what does that mean?”. Most people have been through an education system which to some extent has taught language and communication in some form. Metalinguistic phrases such as “word”, “sentence”, and “meaning” have as much place in day to day discourse as they do in the field of linguistics (see Pable and Hutton 2015). Harris goes further, to argue that:

“professional linguist’s jargon of ‘phonemes’, ‘morphemes’, ‘lexemes’, and all the rest is simply an extension of lay metalanguage.” (Harris, 1998, p.28).

Most of the population have been exposed to the language myth. The language myth permeates so heavily, not only into research, but also into wider society. Everyone is indoctrinated to a certain level into the language myth and the biases it carries with it. The expert population is usually one that has studied a subject matter, but this is loosely defined. of these people will now be pre-disposed to the language myth when discussing language, even if they believe that their input is just the lay-perspective.

Roy Harris wrote that “everybody is a linguist” (Harris 1998, p.20). So if everybody is a linguist, what is a lay perspective? There are no well-formed answers here, and the problem only gets more confusing when autism is considered.

Ultimately, there are no perspectives that are no influenced by linguistic research.

Equally, due to the process of diagnosis, and other cultural influences, there are no

perspectives of autism that are not influenced by research. Just as the communicator cannot communicate about communication without communication, and autistic person cannot communicate about autism outside of the autistic experience.

6.2.6 Lay Perspective in Segregational Linguistics: the Hocus-Pocus and God's Truth Approaches

The above points have demonstrated the integrationist rejection of the linguistic expert in the scientific analysis of communication, and outlined the integrationist support for the lay-perspective. However, this is not to suggest that only the integrationist claims to hold this perspective. Other epistemologies certainly value the lay perspective. Instead it is the relationship between the researcher's expertise and the lay perspective that makes the integrationist different. The linguist is still afforded a privileged position in these other epistemologies, and is believed to be able to gain insight beyond that of the layperson's insight.

Typically, the linguist can arrive at this deeper insight through the adoption of one of two approaches. The first of these approaches is called the "hocus-pocus" approach, which is described as:

"A phrase coined in the 1950s to characterise one of two extreme states of mind in a hypothetical linguist who sets up a description of linguistic data; opposed to God's truth. 'Hocus-pocus' linguists approach data in the expectation that they will have to impose an organisation on it in order to show structural patterns. Different linguists, on this view, could approach the same data, and by virtue of their different backgrounds, institutions, procedures, etc., arrive at differing descriptions." (Crystal 1991, p.166).

In contrast, the second approach is called the God's Truth approach. In which:

“the aim is to demonstrate an underlying structure really present in the data over which there could be no dispute” (ibid).

In the god’s truth approach, the linguist is seeking a truth in the data, in the same manner that a scientist seeks truth in their subject matter. The god’s truth approach is, in this way, the most akin to a science. A linguist presented with data, can apply their methodology and arrive at an inescapable conclusion. The conclusion would be shared should any other linguist approach the same situation. Just as any two botanists will arrive at the same conclusions on photosynthesis when presented with the same data.

Meanwhile, the hocus-pocus approach challenges this, the research is a process in which the linguist is imposing their order onto available evidence. The researcher is not attempted to delineate any order that is inherently within the data:

“Consequently, linguistic description was to be judged ultimately by its own internal consistency rather than on its correspondence point-by-point to each piece of observable data.” (Harris 1998, p.17).

There is a third approach combining the two, which won’t get much attention in this thesis, referred to as the holy-pocus approach, where the linguist’s extractions are also abstracted by native speakers of the language (see Robins 1989 p.44 in Harris 1998 p.18). The integrationist fits into none of these three camps, the integrationist does not claim that there are no linguistic facts to be found, but that traditional linguistics, and all three of these approaches, are looking for them in the wrong places.

6.2.7 Fallacy of Verbalism

The integrationist does not give the same primacy to spoken language that is so often prevalent in other communication research. The integrationist not only sees communication as ‘all processes in which human activities are contextually integrated by means of signs’ (Harris 1996 p.11), but also gives no priority to any one of these activities. Language is no more salient than any other process of communication to the integrationist.

The fallacy of verbalism is simply Roy Harris’ proposal that there is a fundamental mistake about the role of language in the western tradition of linguistics. The mistake is to assume that all signs must operate, in some way, like words. All signs must be units with a form and a meaning. For example, “a frown means this, a nudge means that” (Harris 1996, p.25). The tacit fallacy permeates linguistic understanding so much that it has even penetrated our nomenclature such as “body language” (ibid). In short the Fallacy of Verbalism refers to the repeated attempts to reduce communication to a verbal interaction in segregationist linguistics.

The consequence of this assumption is to draw one of two conclusions about the relationship between language and the world. The first conclusion is that language imposes its own order on the world, the second conclusion is that language is a mere labelling system for an order existed prior to communication (ibid).

The integrationist position is that each of these conclusions is that they are each “complementary facets of the same mistake” (ibid). The integrationist counterpoint to these conclusions is that:

“language must conform to the basic order of our communication universe before words can in any way contribute to articulating it, or assist us in dealing with what lies beyond it” (ibid).

Language is neither necessary for us to understand the world, nor is it necessary as a meta device for understanding the world.

The consequence of this is to blur the lines between verbal and non-verbal communication. Defining something as either of these categories relies upon the researcher to identify one communication system in relation to another.

The integrationist recognises that a frown can mean frustration, just as much as the word “frustration” can. Harris (online) provides a further examples. The answer to the question “where is the Town Hall” is equally linguistically credible whether it be the verbalised answer “the building opposite is the Town Hall” or simply raising your hand and pointing. Equally, when asking somebody to shut the window, the act of shutting the window is the non-verbal response desired:

“By shutting the window, your addressee gives a contextually integrated response to your question. Thus there is a sense in which that response is no less a linguistic act than your utterance, since what makes it the right response is determined by the language of your question. Shutting the window in those circumstances is an intrinsic move in the communication process. If you then say ‘Thanks!’ when the window is closed, you have just taken part in an integrated sequence of activities involving you and someone else, of which the crucial component (getting the window shut) did not involve uttering words at all.” (ibid).

The blurred boundaries between the linguistic and the non-linguistic, and the challenge of the concept of a purely linguistic component, lead to the obvious

challenge of the salience placed on verbalism in linguistic research. While Integrationalism is by no means the only approach that recognises the importance of the non-verbal, it is advanced in its view that verbalism and language are no more salient than any other feature. The integrationist does not see non-verbal communication as a substitution, or compensation, from verbalised language.

From a functional perspective, the fallacy of verbalism is simply the primacy that is given to spoken language in linguistic research and the accompanying underlying supposition that anything which is not spoken language is subsidiary to it. Adopting the integrationist perspective is a move away from this. The integrationist does not see any sign as more or less significant, meaningful or salient than any other.

6.3 Integrationist Linguistics: Well-Placed for Autism Research

6.3.1 Introduction

The purpose of this section is to demonstrate the manner in which aspects of the integrationist epistemology can benefit the field of autism research. Yet it is difficult to do this without creating a paradox. The thesis so far has focussed heavily on reacting to existing autism research and has aimed to demonstrate how the integrationist challenging of the language myth can also challenge misconceptions about autism. Yet it could quite rightly be stated that this does not actually progress understanding of autism. It is the challenging of old ideas, but does not provide a pathway for the introduction of new ideas.

As has been stated already, the introduction of new ideas is not the purpose of this thesis, but the identification of a way this can be done is. To do so, it needs to be asked what is understood by “autism” and “autism research”. If it is not the

conclusions and practices of that described in previous chapter, then what is it? Again, what autism *is*, is not something that be answered in this thesis. Instead, this thesis will discuss the benefits of the integrationist perspective alongside some first-hand descriptions of autism. Ideally, these would require the direct input from an autistic perspective, on a parity to the researcher's perspective as per Participatory Research described below. Unfortunately, this has not been within the scope of this thesis. Instead, the autistic voice is captured from published works. The difference here is that these works are not treated as data, instead they are discussed as another academic published work would be discussed. The autistic voice is elevated from "data" to "research". The voice used below is from Amanda Baggs, an autistic blogger who has been labelled as "low-functioning autistic". Baggs' seminal piece is a video in which she films herself communicating with the environment and provides subtitles which explain her actions. It is entitled "My Language" (Baggs, 2007).

Fallacy of Verbalism

Verbalism plays a central role in discussions of autism as many autistic people are pre or non-verbal. In Baggs' account of her autistic experience, she observes:

"the thinking of people like me is only taken seriously if we learn your language, no matter how we previously thought or interacted" (Baggs, 2007).

Baggs follows this up to claim:

"we are even viewed as non-communicative if we don't speak the standard language" (Baggs, 2007).

Verbalism and language are directly linked with the perception of how communicative an autistic person is.

Baggs' video attempts to provide some insights into what she describes as her own native language, this language is predominantly non-verbal and consists of a humming which she calls "singing" and various gestures. Baggs claims that while many do not consider these actions to be communicative, they are actually "an ongoing response to what is around me". The fallacy of verbalism permeates further than linguistics and is woven into the fabric of society. It is perpetuated through the teachings in our schools and universities and is so well ingrained that it feels natural. However, when a level of thought is provided it seems totally unnatural to give such precedent to the verbal. In Harris' above example of the Town Hall, nobody would find the pointing inadequate; nobody would claim that the action was uncommunicative.

The actions displayed in Amanda's video may not be as conventional as the action of pointing, however, that is not to say that they have less communicative value.

Pointing is easily contextualised and integrated with past experiences to create meaning; this is not necessarily the case with Baggs' actions. However, Baggs does not claim them to be so easily interpreted "My language is not about designing words or even visual symbols for people to interpret". She is not attempting to integrate her contextualisations with others. Instead her argument is simply that her actions are not un-communicative, they are just not integrated with the experiences of others.

Baggs makes a compelling argument which supports the integrationist argument of the fallacy of verbalism. Her "language" while non-verbal does not mean it is not communicative. While the majority of segregational linguists will, of course, not argue that gestures are non-communicative; few will allow the gesture the same level of consideration as verbal language. Fewer still would accept the apparently uninterpretable actions of Baggs as a "language". However, the integrationist is

happy to accept this premise under Baggs' terms. Integrational linguistics has no such preference for language or verbalism. Instead the communicative gap that Baggs observes is attributed to the failure to integrate contextualisation and past experiences.

“It is only when I type things in your language that you refer to me as having communication” (ibid).

Many linguistic and non-linguistic epistemologies would have treated Baggs' communication in this way. Many researchers would have found no communication in Baggs' actions whatsoever, and had to conclude that Baggs was non-communicative. There is no recognition of a “sign” because the linguistic cannot even begin to imagine what any of Baggs' actions would mean. Such is the strength of the fallacy of verbalism, without language, or actions that act like language ($x=y$), there is no object of study.

Baggs' video provides more insight into autistic communication than most published academic papers do. The integrationist cannot add to what Baggs' says. To do so would be to change it, or to misrepresent it. Instead the integrationist linguistics removes the barriers to Baggs' voice. The integrationist does not reject Baggs' statements because they conflict with pre-existing linguistic theory, nor does it have to re-categorise Baggs' comments to fit with a theory of linguistics. There is no process of data manipulation in which Baggs' words are textualized. The integrationist rejection of the fallacy of verbalism, and the language myth, merely allows Baggs' statement to be heard. Here is the strength of integrational linguistics in autism research, the integrationist is ready to accept a much wider scope of

experiences, and does not have to reject or re-contextualise data to fit into its own intrinsic parameters of communication.

6.3.2 A Quick Note on Linguistics and Autism

The papers that have been challenged within this thesis lay outside the field of linguistics. Yet that is not to say that there are not any linguistic contributions to the field of autism. There are many papers, which are built upon established linguistic theories of communication. Yet these have not been the focus of this thesis for a couple of simple reasons. One is that these papers have not been anywhere near as culturally significant as the works in previous chapters. Kanner, Asperger, Wing, Baron-Cohen etc. have all contributed to a society wide understanding of what autism is. These are the papers that are dictating the direction of thought both in society, and research in general. No theory or insight from a linguist has enjoyed the same status in the wider public consciousness.

Yet, that alone, would not be reason enough to omit the linguistic input to the field. All papers contribute to a wider discourse, and play a part in the dynamic evolution of thought in autism theory. The accompanying reason for not providing a root and branch analysis of linguistic contributions to autism is simply that the work would be largely redundant in nature. The thesis has been building towards the introduction of an integrationist lens. While the application of this lens to the landmark autism papers is a novel and fresh contribution to knowledge, the application of it to other linguistic epistemologies is not.

Integrationist linguistics has an extensive published history of challenging Sausurrean linguistics, Chomskian linguistics, behaviourism, Conversation Analysis, and many other forms of linguistic thought. To merely summarise these previous

challenges, albeit in the context of their application of autism would become a task in signposting prior work, rather than progressing the conversation. The integrationist critique of linguistic discussion is there for all to see.

For example, one could turn to the various attempts to facilitate the ethnomethodological approach of Conversation Analysis to the field of autism. Conversation Analysis has been argued to be “well-placed” for the study of autism (O’Reilly et al 2015) as it provides a “voice” to “disadvantaged” groups (Peters 2010). Furthermore, the approach is argued to allow for the refinement of communicative issues that are involved with A.S.D. (O’Reilly et al 2015 p.355 and Bolte 2015 p.67).

The Conversation Analysis approach to autism is typified by Muskett and Body (2013) who uses the approach to explore inflexibility in autistic behaviour, drawing on a data set of play involving a non-autistic adult and an autistic child.

The only contribution that this thesis could make to a discussion of Muskett and Body’s work would be to look at the Conversation Analysis epistemology and offset it against integrationist beliefs. These would not be original contributions. Instead it would merely be a rehash of Harris’ arguments about the relationship between Conversation Analysis and indeterminacy, and the role of the language myth in ethnomethodological practices (Harris 1981 p.22-23).

This methodological approach contradicts idiosyncratic autism research. There is a popular phrase in autism research circles that is used in the work of Milton and Martin (2017 p.112) “if you have met one autistic person, you have met one autistic person”. Contemporary thinking is moving away from overly generalised, blanket statements and towards recognising the idiosyncratic nature of autism.

In conclusion, this thesis has not engaged with papers such as these to prioritise papers that better highlight the benefit of the integrationist perspective. These papers were selected both for their prevalence to the field, and due to the originality that the integrationist perspective can bring. Most linguistic papers on autism are built on a philosophy of communication that has been extensively challenged by the integrationist perspective, and to challenge their views on autism is a simple process of revisiting Harris and his contemporaries.

Conversation Analysis is an unusual example where attempts have been made to suspend Harrisian misgivings and combined Conversation Analysis and Integrationist Linguistics to give an integrationist methodology. Such work is beyond the scope of this thesis, but more can be found in the papers such as Nielsen (2011).

The above is not to say that such discussion should not take place. Indeed, an integrationist critique of linguistic autism papers would be most valuable. While it would be somewhat circular with the integrationist perspective on the linguistic theory itself, it would open new avenues to explore fallacies in autism research.

For now, it is enough to recognise some of the barriers to participation to autism discourses that linguistics has faced. The brief discussion of these barriers below, is designed to help support the integrationist perspectives potential for contribution.

On paper the segregational linguist is far more well placed for contribution to the scientifically dominated field of autism research. Looking at the critiques of both autism research and segregational linguistics demonstrates this. Bertilsdotter Rosqvist et al. wrote that "the ways in which knowledge about autism is sought have direct effects on the kind of knowledge that is gained" (2019 p.3). There are clear parallels between this and an integrationist critique of segregationist linguistics.

Integrationists have, repeatedly, observed a circularity between linguistic method, analysis, and conclusion where the linguist cannot fail to find what they are looking for.

Furthermore, the segregationist linguistic, when researching must work from the underlying assumption that their finite data set pertains in some way to a wider autistic reality or truth. It must adhere to the “craving for generality”. Thus, it would appear well placed for contributing tools the scientific nature of enquiry that is dominant within autism research.

Furthermore, the entire field of autism relies on an underdefined concept of normality, particularly a normative model of communication. . This leads to conclusions such as autistic people display “problems understanding the meaning and significance of ... speech” (Muggleton 1997) or autistic people do not possess “the ability to use language appropriate to conversational contexts” (Reetzke et al 2015). For autism to be different, divergent, deficient, disordered etc., there is a necessity for a description of normality. Linguistics is dedicated to describing that normative model of communication. It is well placed to contribute to the discourse around that notion of ‘correct’ or ‘normal’ communication that has alluded autism researchers (as shown in previous chapters).

The linguist therefore, both addresses the subject matter in which autism is lacking: a normative model of communication, and has a pseudo-scientific nature of enquiry which is compatible with existing autism research. Yet linguistics has not enjoyed wide success in the field.

Clearly, while linguistics may practice as a science, or in some cases self-identify as a science, it is not always accepted as such in other fields. Of note is that even other pseudoscientific approaches, reject the brand of pseudoscience found in linguistics. Consequently, linguistics has little prevalence in applied theory and implemented policy. For example, the Diagnostic and Statistical Manual of Mental Disorder (DSM-5) makes frequent reference to communication but is apparently void of any theoretical linguistic understanding. Similarly, many of the works from various disciplines cited in this thesis have not adopted linguistic theory in their own (pseudo) scientific descriptions of autism. The linguist is consistency left out in the cold.

Linguistics finds itself in a position of being too scientific for the social studies and not scientific enough to be recognised by the traditional sciences. Not only does this limit the research impact but it also ensures that linguistics forms its own echo chamber, in which misconceptions and pre-suppositions are so frequently repeated back that they become hard to disentangle from the discipline itself. Consequently, the linguist's stock in the autism research marketplace is significantly lower than it deserves to be.

The above discussion serves to demonstrate only two things. The first is that the present thesis' scope does not extend to those linguistic papers of autism that do exist, while also acknowledging that such a discussion would be of value. The second is to demonstrate that linguistics occupies an unusual space within the field of autism research. A space in which it is simultaneously well-placed to contribute, but equally facing too many barriers to participation. The communication experts, are not being consulted about a communication disorder. Perhaps this is another symptom of being in a pseudo-scientific field. It is hard to imagine a cardiologist not being consulted on any "disorder" pertaining to the heart.

It was stated at the start of this section that this discussion would help to demonstrate the integrationist suitability for this area of enquiry. Yet at first glance the integrationist is worse placed. The integrationist neither subscribes to the data sets to have suitable methodological contributions. Nor does the integrationist have a craving for generality, nor the an over-arching theory of normativity that is of use. Yet it is precisely because the integrationist does not have these things that it is so well placed to contribute to autism research. Segregationist traditional linguistics is not scientific enough for the pseudo-sciences, but too scientific for the new, ad hoc wave of autism research emerging in the present day. The integrationists' radical rejection of the linguistic expert means they are well placed to ride this wave, and it is this future that is discussed in the closing arguments of this thesis.

6.4 Integrationist Linguistics and Autism: An Overview of Previous Papers

6.4.1 Roy Harris: Integrating Autism

Bringing Integrationist Linguistics to the field of autism is not entirely new. Roy Harris, the founding father of Integrationist Linguistics, did pen a short discussion of autism in his published notes and papers (2006-2008). Harris writes this more as a discussion around linguistic philosophy, than he does to support any radical change in the field of autism research.

Harris begins by re-highlighting the tendency in 20th century approaches to language to separate language and communication. The separation described is a cornerstone of integrationist critique of linguistic practices. Harris writes that this separation creates a view of language that is only “natural” to autistic children (p.13). He justifies this by summarizing his understanding of the central autistic deficit:

“what is characteristic of various forms of autism (and the root of all ensuing social and developmental problems) is the failure, or inability, to *contextualize* what other people say as something anticipating or requiring a response (p.13, emphasis original).”

Harris’ point is that the divorce of language and communication that is readily used in mainstream linguistics (see Chomsky), only fits with a model of communication that also accepts this central deficit being universal.

Yet Harris challenges the ensuing conclusions that this leads to in regards to autism. Harris writes that such an inability to contextualize naturally results in a lack of response. The lack of response in turn is interpreted in many negative ways such as an inability to understand, an indifference to what has been said, a refusal to participate in conversation etc. (ibid). In turn these conclusions lead to the autistic people being branded “outsiders” and not members of a linguistic community.

In terms of linguistic practice this raises some concerns for Harris. Harris writes that it is important to distinguish between *why* somebody does not answer. For example not answering because one did not hear something is different to not answering because one did not know what to say. Again this is a cornerstone of the integrationist approach. At face value it is hard to distinguish between the two above examples, but the integrationist cannot ignore the difference, and cannot make assumptions about *why* somebody did not say something.

Furthermore, it cannot be neglected that to say nothing is also an act (p.14). To say nothing changes the context in the same way that saying something does. Hence it can be referenced that you did not say something, or a person can repeat themselves in search of an answer, or any number of possibilities. Lack of speech, is

not lack of action. Harris writes that “[i]f proof were needed, one need only look at the way society brands those who are too often silent as ‘autistic’”. Here Harris is touching upon to primacy of language that is so present in all his work. The linguist too often focuses on language based actions or events to the neglect of all other. What is not discussed, or taken into consideration is what someone *is* doing. What actions, facial expressions, gestures, gaze, noises is the person creating. It is impossible to do *nothing*. Everybody is doing *something* and meaning can be imputed to anything. Even if somebody tries to do nothing, this is a meaningful act. An integrationist, would argue that all of the above carry weight equal to language. To view lack of speech as lack of meaning, is a fallacy.

Although the integrationist rarely draws on linguistics data, see the previously discussed concerns around analysis and the role of the researcher, Harris does draw on the published works of Daniel Tammet. Tammet has an Asperger’s syndrome diagnosis, and recalls his school years when he would fail to respond to a teacher asking a simple arithmetic question such as “seven times nine” (ibid). Tammet would not reply, not because he did not know the answer or realise the question was for him, but because “I did not realise that I was expected to say the answer out loud to the class” (Tammet 2006, p.85, cited in Harris 2006-2008 p.14). Harris writes that Tammet’s explanation “drives a cart” through simplistic concepts such as *langue* and *parole* (from Saussure). Tammet has understood the question, and has the physiological and neurological abilities required to say the response, but yet there has still been a communicational breakdown. Traditional, Saussurean linguistics, cannot explain the breakdown. The language has been spoken, understood, a response has been generated (when he knows the answer). Here, traditional

linguistics must conclude that there is no communication problem here, Tammet is just autistic (p.14-15).

The body of research around autistic people, is compiled in a manner that means when the framework cannot explain something, the explanation is reduced to simply be “autism”.

Autism and the study of autism is an exemplar of the language myth permeating other fields. The linguistic misunderstanding described by Tammet and analysed by Harris above, has consequence reaching beyond the study of communication. The language myth here impacts on the very understanding of autism itself. Harris writes that (ibid):

“Current medical thinking about autism endorses this diagnosis. But that – an integrationist might suggest – is doubtless because medical authorities have been induced to subscribe to the same language myth as is propagated by orthodox linguistics”

The language myth does not allow for a satisfactory description of what has occurred with Tammet above. As far as the language myth is concerned, the transference of identical idea, from sender to receiver has occurred. Yet there has been a breakdown in communication. Without a fundamental overhaul of how communication is conceptualised, the only answer can be that the fault must be autism.

Harris then arrives at a discussion of autism and “language-neutral communication” and “analytic truths”. Harris explains that those indoctrinated in orthodox linguistics fail to recognise that the statements “seven times nine is sixty three” and “beer is made from fermented hops” are radically unlike each other.

“Seven times nine is sixty three” is what can be described as an “analytical truth”. Analytical truths are characterised by the fact that “they yield no information about the world”, the statement is true regardless of what is being calculated (ibid). A mathematical statement such as “ $7 \times 9 = 63$ ” is “language neutral” in the sense that it is applicable in an English classroom as it is in a Chinese one. Although the language of the equation will be different, the statement itself is the same.

In contrast “beer is made from fermented hops” or “everything white is white” (p.16) are neither language neutral nor analytical truths. Both provide information about the world. Both are linguistically bound statements.

Harris proposes that this may be why autistic people are “surprisingly ‘good at numbers’ but ‘bad at communication’”, because numbers are not “typical linguistic signs”. Numbers reference numbers, regardless of if you are counting buttons or days. Whereas other linguistic signs are not attached to meaning, in the way that orthodox linguistics suggests. A dog does not reference the same dog every time it is used, unlike the concept of “5” which does. A “dog” can be 4 legged, 3 legged, a Cocker Spaniel named Ronnie, a Staffordshire Bull Terrier, a toy, an insult, or any number of infinite possibilities when temporarily integrated. But 5 will still mean 5, even when form can change.

Yet Harris does not subscribe to an autistic pre-disposition to language-neutral analytic truths. Returning to Tammet who describes the difficulty as “a difficulty in statements and get[ting] the overall picture” (Tammet quoted in Harris p.16). Or as Harris puts it autism is (p.16):

“not a problem of relating language to the world, but of *integrating various parts to form a whole*”.

Harris, the founding father of integrational linguistics, through an analysis of one autistic account of one interaction, has summarised what autism is for the integrationist. However, the present thesis would challenge Harris' work on autism and propose that it need to be updated. Firstly, this thesis distances itself from the concept of autistic people being naturally good at numbers, or anything else. While this is a stereotype, it is not often a truth and can be harmful to the autistic community.

Furthermore, Harris' work is still rooted in the concept of autism having a "problem" or deficiency. The present thesis has been consistent in challenging a hunt for a defining autistic deficiency. Harris is also open to contradicting himself with his definition of autism, as his conclusion borders on the over-arching statements about communication that his body of work has challenged.

The integrationist views communication as a creative process of integrating the past, present, and prediction of the future. In identifying an autistic "problem" of "integrating various parts to form a whole", Harris is suggesting that autistic people are limited in their capacity to integrate these parts to form meaning. Thus their communication is problematic.

Instead, the present thesis would prefer to move away from these muddy waters. While acknowledging that everybody's past is different, it is important to also note that autistic people have, most likely, had a past full of more difficult communicative experiences. Autistic people, therefore, are integrating this past of difficulty with their present situation, and their predictions of a future in which they may be misunderstood again, or misunderstand somebody else again.

Thus, instead of Harris' claim that autistic people struggle to integrate the parts to make a whole, the present thesis would rather present a model in which autistic people are attempting to piece together experiences that are different from non-autistic people, but are being asked to create a whole that is similar to the wholes that non-autistic people create. Autistic people are not deficient in creating a "whole" they merely are being asked to create *the* "whole" that is expected of them so that they can integrate it with other people's wholes in interaction.

Perhaps if Harris was writing this paper in the present day, with advances in autistic understanding, these modern concepts would have permeated his work and altered his conclusion. But that is entirely speculative. What can be stated for certain is that there are valuable lessons from Harris for someone pursuing an integrationist account of autism. Harris' work is still the foundation of integrational linguistics, yet when it comes to autism research, his epistemology may arrive at different conclusions when paired with new understandings of autism. The new integrationist can walk in his footsteps but arrive at new conclusions.

The value and role of the autistic voice is prevalent in Harris' work. While Harris does not overtly discuss this as a practice, Harris' work is entirely centred around the account of an autistic voice. When discussing maths and analytical truths, Harris returns to the autistic account to draw the conclusion. The autistic voice is not data, Harris is not manipulating it to draw a conclusion, instead the autistic voice is treated as an equal to the research voice. Harris integrates the two accounts to draw final conclusions. None of this is discussed, but it is natural to the integrationist.

Harris does not engage directly with philosophies of autism. Yet the integrationist critique of the language myth in explaining autistic communicational breakdowns

provides insight into the flaws with the various theories of autism. Each cannot understand why communication has broken down using the language myth that they are indoctrinated in. Each, therefore, must assume that communication broke down because of autism. Which leads to the debate of the central autistic deficit. The language myth is, in part, responsible for the scientific studies of autism, which place the researcher as the expert, and analyse autistic deficit. Remove the language myth, and it allows for an approach to autism that sees the barriers to the individual perspective removed, and sees a move away from over-arching theories of autistic deficit. Communicative acts can be integrated in context, and perceived miscommunication does not have to be due to an autistic “fault”. It is simply two or more parties integrating their activities. Broadening the understanding of linguistics, removes the need for autism to scapegoat failings in the pre-existing linguistic framework’s ability to account for it.

6.4.2 Charlotte Nielsen – Towards Applied Integrationism – Integrating Autism in Teaching and Coaching Sessions

In this 2011 work, Nielsen, now known as Charlotte Klemmensen and referred to as such henceforth, reintroduces the discussion of the potential practical applications for integrationism in the field of autism. Klemmensen focuses on small specialist settings for the education of young people diagnosed with Asperger’s (henceforth the blanket term of autism will be used when discussing Klemmensen’s work), and establishing a way in which integrationism can describe the communication problems between the autistic children, and their teaching staff.

Similarly to the present thesis, Klemmensen opens by challenging to perceptions of autism that is considered conventional in academia, and draws on the works of Roy Harris to help in doing so. Klemmensen also draws parallels between the radical

linguistics of Harris and the radical psychology of Dr. Ronald D. Laing. Laing is summarised by Klemmensen as saying:

“society values “normality” so highly that we as individuals fail to observe what the other’s needs are. Linguistically and extra-linguistically we strive for a state of “normality” that we educate each other with following our own desires and fears of not being “normal”. This can seem invalidating to the content of the other’s contextualization, violating the other instead of loving the other (Laing, 1967, p. 31 paraphrased in Nielson p.594).

Klemmensen draws parallel between this anti-psychiatry approach and the integrationist approach. While the former rejects the study of segregated psychology, the latter rejects the segregated study of language. In both practices communication is:

“the ongoing processes of contextualization that both contextualizes and recontextualizes meaning in the continuous birth and rebirth of the context. Signs are in both discourses stated as the products of communication as it is happening and not as structures underlying society” (Nielson p.594).

The value of such approaches to the study of autism, is that the researcher is able to recognise the creativity of language, and stop the structuralist tendency to label language as “right” or “wrong” (ibid).

The aim of Klemmensen’s work, and the reason it is of value to the present study, is to explore the way in which an integrationist approach may be applied to the discussion of young people with autism diagnoses.

Klemmensen's work is attempting to apply integrationism, which has a history of being both critical and theoretical in nature. To work towards such an applied approach, Klemmensen sets research questions.

To answer the paper's research questions, Klemmensen draws on several sources:

1. Asperger's retold responses in communication in the class room.

The first of these are the voice's of autistic students in the classroom. Klemmensen's methodology to answer this first research question was:

"I observed the class as if it were a focused interview, where I did not conduct an investigation but answered my own questions of interest through their comments, which I noted down."

2. Literary Cases of Asperger stories

Klemmensen draws on the same description of the autistic experience as Roy Harris did (above) in the form of Daniel Tammet's *Born on a Blue day*. Additionally, Klemmensen adds insight from Temple Grandin. Grandin is a famous autistic person, with a diagnosis of Asperger's and many published books about her autistic experience. Grandin is also the subject of the film biography "Temple Grandin". Each of these autistic experiences provide descriptions that do not match with any segregationist perspective of communication, and consequently autism remains mysterious to the segregationist, "but not the integrationist" (Nielson 2011, p.597).

3. An Asperger's student self-reflection

More insight came from dialogue with a young autistic person. The young person did not engage in class discussions as they felt them to be below his level and therefore saw no reason to participate. Klemmensen demonstrates the value of extending understanding of communication beyond those signs that are salient to many susceptible to the language myth. The young person was deemed as not paying attention in one class due to lack of verbal response or eye contact. Klemmensen proposed replacing these signs of attention with the young person wiggling their ears to indicate attention. The strategy was successful.

Through these dialogues, and the classroom observation, Klemmensen learned that:

“although we can state an integrational approach and engage in a theoretical discussion on which questions to pose, it is also necessary in a case-study to incorporate common beliefs and myths in our guidance – not to understand the phenomena we describe, but to treat the challenges people with communicational disorders face in their daily lives” (p.597).

Here is a valuable lesson. An integrationist seeking to foreground any autistic experience, must include any experience that is still embedded in segregationist beliefs. The language myth is wide-spread, and people are indoctrinated language learning and education. Arguably autistic people are even more exposed to this, as they receive intervention to support them with a move towards normative behaviours, interventions also rooted in the language myth. Therefore, their experiences are integrated with an understanding that contains common myths and beliefs about language. These cannot be ignored just because they do not coincide with the integrationist’s beliefs, as in doing so the integrationist would be as guilty of imposing their world view onto the statements as the segregationist researchers have been.

Autism, for Klemmensen, also works to support an integrationist's arguments:

“the beauty of it is that though Asperger-students appear to be super-structuralists to whom you can teach the rules of speech acts, they also prove structuralism a false assumption on how communication actually operates in the real world, since no signs can function as “context-neutral” (Harris, 2009b, p. 97 in Klemmensen 2011 p.)”

Rules of communication taught to autistic people are perfect examples of segregationist methodology. Isolating these rules and teaching them in a manner they believe to be context neutral, to be replicated in situations that segregationist believe to be reoccurring, is the definition of segregationist.

An integrationist rejects that these context-neutral rules can exist, and rejects that reoccurring contexts are something that can be prepared for.

“What Aspergers fail to understand when not trained in self-reflection is the non-rule guided free flow of human communication... The rules they learn do not always work because situations cannot be calculated” (ibid).

The very fact that this is the case, is support for the integrationist and argument against the segregationist. The de-contextualised rules cannot be rolled out regardless of contextualisation.

While this thesis would challenge the language around what autistic people inherently “do not” or “cannot do” in Klemmensen's description (see comments on self-reflection on pages 597-598), it is certainly agreed that the above is supportive of the benefits of an integrationist's perspective being of value in autism research.

This thesis also values the way in which Klemmensen has collected the autistic voice. While Klemmensen does refer to this as “data”, the present paper would argue that it is not treated as data traditionally is. Klemmensen does not impose her understanding on the data, nor does she attempt to organise the data in a manner that suits her point.

Instead, this thesis would argue, it is treated not as data, but as counter literature to the mainstream descriptions of autism and communication. The autistic voice captured in class and in dialogue, and the published account of autism, are valuable resources that are not represented in the history of autism research represented in the previous chapters of the present thesis. Klemmensen does not write as such but in this chapter such an approach will be offered as the way forward for autism research.

Klemmensen lays out the integrationist study of autism as a new discourse, this opens with a discussion of what constitutes a science to the integrationist (p.600).

Klemmensen cites Harris’ discussion of science:

“supercategories such as science, art, religion, and history are themselves verbal constructs, and thus language dependent. But they do not all come to be construed in the same way. That is why it is worth paying attention to the linguistic process involved in each individual development. (...) The basic function of a supergaiter is to integrate what would otherwise be separate activities and inquiries; and the result of that integration is to re-draw the map of the intellectual world that society as a whole adopts” (Harris 2005 p.xi in Nielsen 2011 p.600).

Klemmensen embraces Harris’ description, treating science as a verbal construct.

Klemmensen recognises that each of these super-categories, or sciences, requires

its own specific terminologies to function. Once this terminology exists and popularised it will be adapted by large communities in research, society, and by the individuals being described themselves. Consequently, the founding of these supergroups, and the language upon which they are based, can impact on self-understanding for those within the group:

“That clinical discourse then determines how people treat autistic individuals and may also lead to problems with their self-perception because we tend to experience and treat them in a certain way that makes them different. Such one-sidedness may lead to discrepancies in self-understanding and forced integration of activities that individuals do not agree to, though this discussion will not be further elaborated on within the scope of this paper.” (Nielsen 2011 p.600).

Klemmensen sees examples of this within the written descriptions used earlier in her paper, with Grandin and Tammet adopting clinical discourse. Klemmensen proposes that this is to position themselves in line with the higher ranking field of autism and give themselves validity.

The autistic perspective cannot entirely overcome the pre-dating clinical experience, nor cannot it exist in a world in which the clinical experience does not exist. It is integrated in a world where the works that have gone before it, and which exist alone with it, influence the way they recount their experience.

Yet despite this Klemmensen has found a few ways in which to answer Harris’ call to access any linguistic “fact” that may exist:

“where there are linguistic facts available, it is the participants who are in possession of them. If a linguist wishes to have access to these facts, there is no option but to try to recover them from the participants.” (1998 p.145).

Klemmensen's paper builds to a discussion of the "data" collected from observations, literary cases, and academic input – both theoretical and methodological discussions. Drawing on the Tammet account, as discussed by Harris, Klemmensen proposes that psychologists describing unresponsiveness may reconsider if the integrationist perspective is introduced. Instead:

“responselessness can then be treated in relation to contextual understandings and previously assumed, non-responsive behavior can be reconsidered and treated as a chosen – though silent – strategy for engaging in initiative-response sequences, not as an inability, when guiding Aspergers” (p.601).

Klemmensen remarks that the key to new practice is autistic reflection upon their own practice:

“Asperger-individuals reflect upon their experiences with communication and social play which indicates a good reason to coach them to help more of them complete their education and develop their skills.” (p.601).

This thesis would encourage an extension of this. Beyond looking at self, autistic reflection on their practices can be elevated to be included in research. Not as data, but as literature. In the same way Tammet is used in Harris and Klemmensen, holding autistic accounts up against existing literature, and foregrounding the lived experience, can provide fresh insight into the field.

On this matter, the nature of the autistic inputs being represented in Klemmensen's work needs to be considered. It is impossible to communicate about communications, without using communication. Language is reflexive, and linguistics, whether lay or otherwise, is a linguistic exercise. Therefore, the data collected by Klemmensen, is open to all the meaning making procedure, including

misinterpretations, that the initial communication being described is. Or in the words of Harris (1998 p.25):

“What this means is that language itself has to provide the means by which linguistic phenomena may be analysed and linguistic information give. We cannot get ‘outside’ language in order to do this”.

The autistic data in Klemmensen’s work is autistic people talking about the autistic communicative experience. For the most part, it is talking about the communicative experience with non-autistic people. The meta-practice here cannot happen outside of communication, and presuming Klemmensen herself is not autistic, it cannot happen outside the autism-to-non-autism experience. Klemmensen, therefore, required a mindfulness of the limitations of this data, and that any conclusions drawn in her work are extractions made from her own interpretations and beliefs about what the autistic person was saying.

Furthermore, this thesis would encourage a slight shift in conclusion from Klemmensen, who occasionally appears to fall into a search for a central deficit in autism with comments such as:

“clinical discourse may not help Asperger-individuals solve their communication problems... instead a discourse should be described as formulated by the Aspergers themselves in order to help them solve their problem in communication” (p.602).

While the use of problems can certainly be used in the sense of disability, rather than impairment, the language is slightly problematic. Instead, this thesis would encourage a framing that saw the problem being of individuals integrating their activities together. It is not an autistic problem, but instead a problem that all people face when communicating..

Otherwise, Klemmensen's work has been a progressive advancement of Harris' Integrating Autism. Klemmensen has progressed the ideas found in Harris, and has begun the conversation of how the integrationist perspective can begin to fit into autism research. While the data collected is open to discussion around second order interpretation, Klemmensen has begun to find the pathways from integrationist critique, to integrationist contribution. In the field of autism, any move towards the latter is vital. The field of autism needs an integrationist perspective, but to do so, it needs ways in which the integrationist can engage with the autistic population and not just with critiquing autism research.

6.5 Integrationist Linguistics and Autism Research: A New Future?

6.6 Individual Model vs Social Model: Integrational Input

6.6.1 Introduction

Autism research can generally be divided into two models of disability: The Individual/Medical Model and The Social Model. The Individual Model sees disability as something that is biologically wrong and thus seeks remedial treatment to lessen the disability and make you more "normal" (Oliver 1996, Goodley 2011).

Contrastingly, The Social Model of disability views disability as society's oppression of people with impairments. This oppression can take many forms, including physical and attitudinal barriers. According to the Social Model, addressing disability isn't about removing the impairment but removing the social barriers (see Oliver & Zarb 1989 and Barton 2001).

The medical approach is "rooted in the medical model of disability" (Beardon 2017 p.17). The medical approach assumes that the non-autistic way of being is superior

to the autistic way. This is a dangerous route to take, as once one identifies a cause; the next logical step is to attempt to find a cure.

The Social Approach merely views autism as different rather than as deficient. Beardon (ibid) in a discussion of how to better accommodate autism in society argues "[inclusion] should be based on good understanding - not necessarily of autism per se, but of how autism impacts on the students, within his or her own specific environment at any given time." It isn't what autism is that is important, but how autism impacts on autistic people. Beardon (ibid) continues:

"Being autistic may well be problematic for the individual, living in a society made up primarily of the predominant neurotype (PNT), but this is not synonymous with autism being a problem. Being autistic could instead be understood as being at a higher risk of disadvantage – rather than being disabled, or impaired, deficient, or somehow 'lesser.'"

In short the medical model sees autism as deficient, and any impairment rests with the individual. The social model sees autism as being different, with any disablement being the result of the environment being tailored to a predominant "neuro-type".

6.6.2 Integrational Linguistics and Models of Disability

The conflict with the Individual/Medical Model cannot be *solved* by integrational linguistics. The integrationist cannot support either of these models of autism, and instead sees both as belonging to the same school of fallacy.

The medical model is based heavily in the notion of normativity. It relies upon there being a correct, non-autistic way of communicating. Then it defines autism in relation to this central normal way of communicating. The notional of normalcy is often

undefined, or when it is defined, based entirely on assumption and personal experience.

The main conflict between the medical model and integrationist thought is the construction of this normative notion of communication. The concept of autistic communicational deficiency requires a comparison to be drawn between the concepts of autistic communication and the concept of normal communication. It is not the relationship between these concepts that the integrationist challenges, it is the very construction of these concepts to begin with. To describe either normal communication and autistic communication as a phenomenon requires an overarching model of communication. Such a model can only exist in isolation from both use and context, that the integrationist cannot subscribe to.

Meanwhile, the conflict the social model does not subscribe to the individual model of impairment and autistic deficiency. In the social Luke Beardon defines the social model as:

"Being autistic may well be problematic for the individual, living in a society made up primarily of the predominant *neurotype* (PNT), (2017, p.17, emphasis added).

Not all use of the social model includes reference to neuro-types but it is a common theme. Neuro-types appear Beardon defines his neuro-type based approach by outlining:

"[t]hough they share all sorts of behavioural traits there is a clear difference between the autistic brain and the predominant neurotype (PNT) brain."

Beardon's approach combines the unobservable workings of the brain with the observable (though not always interpretable) behavioural acts. The point of contention between IL and the Social Model, however, is the attributing of tropes of

behaviour (communicative or otherwise) to both the autistic and non-autistic groups. Furthermore, on a wider scale, the creation of neuro-types creates wider categorisation, each of which will have its own criteria for identification.

Doing so creates an expansion of the fallacy in the medical model. The suggestion that autistic communicative behaviour can be observed, studied, and interpreted separately from the moment of use. The difference between predominant neurotypes, and normativity has huge political and self-identity implications, but when it comes to linguistic philosophy they amount to the same thing. There is the construction of what most people do, and the construction of autistic people do. Each construction has an over-arching theory attached to it, one which decontextualises communication.

Both the medical and social model have parallels with models of linguistics that subscribe to a fixed code. Fixed code models of language assume a uniformity across members of a linguistic community. In these models, the speaker and hearer are each just a “linguistic automaton” (Harris 1996, p.147), performing communicative functions in the same way that a computer processes its input and output. Harris writes that this “is a basic mistake, which conflates the language of community with its codification” (ibid). In this discussion of the autistic community, each is assuming a normative manner of speaking, with a fixed code of language and rules of communication. The medical model defines autistic communication as being unable to participate in this community resulting in a deficiency in communication. The social model instead sees the autistic community as not belonging to this community with its fixed and normative way of communicating. Instead, the autistic community belongs to its self, with its own distinguished but equal codification. Either way, the

two models are falling into the language myth, and the integrationist cannot subscribe to either model when conducting autism research.

In each model, a definition of autistic and non-autistic communication is used, and tropes of communication are assigned to large groups of people. Communication is not treated with absolute idiosyncrasy.

6.7 Integrationist Perspective: What is Autism?

Much has been done to unpick theories of autism in this thesis. The above discussion of the medical and social models of autism provided an integrationist debunking of both models, concluding that autism is neither a deficiency nor difference in communication. A common criticism of the integrationist perspective is that it simply critiques the language myth, and does not offer any alternative. So what is autism if it is not the above?

It has already been written that autism is neither deficient nor different, if it is not defined by isolated behavioural traits, and if it is not defined on observable behaviour. It has also been written that autism is not able to be represented by an over-arching theory. It should be noted that this is not to defy autistic people their identity. Those that have a definition of autism, whether from a research paper, their own definition, or the definition of another autistic person, should not be robbed of this identity nor challenged on its validity.

In regards to use of the term “autism” the integrationist can offer something that few others can, a truly unique and flexible definition of autism. The term “autism”, like all words, has not fixed meaning. It requires no whittling down, refining, redefining, nor debate. The term can mean anything, to anybody, and it can change in any given moment. An autistic person can identify as autistic, without having to pigeon hole

themselves. The term is, to the integrationist, entirely fluid, it changes with every use, and allows for an endless developing understanding of autism for the person using it.

Furthermore, for autism as a concept rather than a term, autism has no fixed barriers. It requires no compromise from the individual. Nobody must believe that they are a little bit autistic, because they only meet certain criteria. Similarly, nobody must carry autism round as an identity which they are all the time. Autism is a term with which one can integrate their behaviours. The use of the term, the evoking of the concept, is used creatively by the individual, in that moment, to create meaning.

The lack of rigidity of in both form and meaning makes autism hard to study. The approach described here does not lend itself to the scientific discussion of autism. There is nothing that is inherently autistic. No sub-section of society to draw a box around and label. No group of behaviours to list as diagnoses.

However, the approach here does lend itself well to the empowerment of the population. Each person has their own individual history with autism, and their own evolving understanding of it. Each person will integrate this history, through communication, with others. There is no right and wrong, autism can (and most certainly will) mean different things to different people at different times. Each person can only integrate that understanding in the moment, with the other temporally linked events.

Lay-perspective discussion taking part within the community, are evidence that each member of a community does not share the same beliefs about their “language”. Not all autistic people will feel the same, and may reject the views of other autistic people just as much as they may reject the views of a researcher. It is just a further thing to be mindful of in the integrationist approach.

6.8 Integrating Echolalia

"Instead of answering the question, we just say the exact same question straight back at the person asking it. Once, I thought we did it simply because we didn't know how to answer, but now I think there's more to the mystery than this. Firing the question back is a way of sifting through our memories to pick up clues about what the questioner is asking" Naoki Higashida (2007 p.25) - Autistic Author of *The Reason I Jump*

6.8.1 Introduction

Echolalia, is a cornerstone of autism research. Echolalia is described in research as "meaningless repetition of the words of others" (Grossi et al 2013 p.903), is identified as a core characteristic of autistic interaction (ibid), , and is so frequently connected to autism that it has become somewhat of a stereotype.

The integrationist epistemology is a useful lens for looking at echolalia. The description provided of echolalia above contains two concepts the integrationist traditionally takes issue with. These concepts are: "meaningless" and "repetition". Each of these concepts will be explored below, as will the relationship between echolalia and intent.

Repetition

Studies of autistic echolalia, such as Grossi et al, suggest that autistic people are prone to repeating what other people have said. The concept of what constitutes repetition is rarely considered, beyond the initial descriptors required to identify

occurrences of it. Repetition, and by extension echolalia, is merely the reproduction of that which has occurred previously.

Integrational linguistics has given much consideration to repetition. Consequently, the integrationist perspective will argue that a theory of echolalia, that relies upon the concept of repetition, is embedded in the language myth. Echolalia is based on the commonly segregational assumption about speech that "anything that is said can always be repeated" (Harris 1998 p.82).

Integrationists argue that this is not the case, instead "[s]peech communication can only take place where and when it is communicated" (Harris 1998 p.82).

Communication takes place "on the go" and language is "time bound" (1998 p.81).

These facts are inescapable, and there is no way to communicate outside the time bound nature of communication. The integrationist refers to this as the "principle of contemporality" (ibid).

It therefore follows that there is no such thing as a contextless sign. Every sign is occurring contemporarily as is contextualised alongside the occurrences the precede it, happen simultaneously too it, and the communicator's anticipations of what will follow it. Everything that happens, the communicator must believe to be relevant to what is happening at that time, to make any sense of it.

Considering the principle of contemporality in regards to repetition, then viewing" repetition as merely 'doing the same thing over again' immediately becomes problematic" (Harris 1998 p.82). Making the same sounds, is not equivalent to saying the same thing. The context changes with the original utterance: "[t]he utterance, once uttered, is an item in the human environment, and, like communication, and like any other such item, may be referred to and talked about" (Joseph et al 2001 p.213).

Thus the utterance that could be seen as a repetition, is actually a sign constructed about the original sign (see Duncker 2017 p.31).

Harris provides the following example (1998 p.82):

“A says: ‘it looks like rain.’

B says: ‘What did you say?’

A says: ‘It looks like rain’”

Observing the principle of contemporality, the second utterance from “A” is not merely a reoccurrence of the first utterance by “A”. Harris expands (ibid):

“the contextualization of A’s second utterance is irreducibly different from that of the first. A’s second utterance is a reply to the question ‘What did you say?’, whereas the first is not. The second utterance may be constructed as a quotation of the first; whereas the first utterance can hardly be constructed as a quotation of the second. The answer ‘What I said was that it looks like rain’,... cannot stand as a paraphrase of the first utterance.”

The same words do not constitute a repetition of the same speech act. Harris has detailed just a few of the ways in which the utterances differ in the above example. “Saying the same thing over again is no more a theoretical possibility in language than scoring the same goal over again is a theoretical possibility in football. A second goal is another goal, regardless of who scores it or how.” (Harris 1998 p.82-83).

To consider the above approach in relation to echolalia: how is the repetition part of the definition met? One cannot merely repeat what another has said, as one cannot repeat what they have said in the example given above. The integrationist, researching autism, just cannot accept this definition.

Besides, even if repetition was possible, Grossi et al's definition of "meaningless repetition of the words of others" (Grossi et al 2013 p.903) would not be acceptable. If the words of others are "meaningful" and the echolalic utterance "meaningless" then the echolalic utterance cannot be repetition. The entire definition is a paradox. Recreating a meaningful phrase, in a meaningless manner, does not constitute repetition. Therefore, "meaningless repetition" is impossible, if it is to be presumed that at least some of the repetition or of phrases Grossi et al deem to be meaningful. Returning to the first had account of repetition from Higashida that opened this section:

"Instead of answering the question, we just say the exact same question straight back at the person asking it. Once, I thought we did it simply because we didn't know how to answer, but now I think there's more to the mystery than this. Firing the question back is a way of sifting through our memories to pick up clues about what the questioner is asking" Higashida (2007 p.25) - Autistic Author

Holding Higashida's account up as an alternative to work on echolalia such as the referenced study from Grossi et al. Higashida identifies two possibilities:

1. "we did it simply because we didn't know how to answer".
2. "Firing the question back is a way of sifting through our memories to pick up clues about what the questioner is asking".

Neither of these possibilities matches the original utterance. The original question that was uttered cannot be produced because they do not know how to answer, as the question did not exist at that time. Neither can the question be a way of sifting through the autistic person's memories. Reintroducing the principle of

contemporality, both of Higashida's conclusion rely on the original utterance taking place for the "repeated" utterance to have its function when integrated in context.

An autistic person may reproduce the sounds, but is now uttering them into a context in which the sounds have already been uttered. The reproduction of these sounds is not the same as repetition, it is an act of integrating the new utterance within the context that includes that old utterance. It is contemporally integrated, it is not the same.

6.8.2 Meaningless

The discussion of meaning here interlaces with the section on repetition directly above. While the concept of meaning is discussed above in relation to its impact on repetition, the following discussion will be about the philosophy of producing communication that is meaningless in general.

The act of integrating the utterance into the environment in which the previous utterance has existed is a meaningful act. That is established above by the works of Harris and Higashida.

All signs invariably have the potential to be meaningful in the moment. If it exists within the temporally bound context, then it can be integrated into the person's understanding and be meaningful. It is not for the researcher to determine whether a sign is meaningful.

The meaning can be for the autistic person as per Higashida's theory of it being used to sift through memories. It can be for others, which ethnographic tools such as Conversation Analysis would point to evidence within the conversation such as responses, and the integrationist acknowledges that the fact echolalic utterances can be reflexively referred to by speakers proves they can be meaningful – although it

would not assume to be able to provide insight beyond that. Finally, paradoxically, the fact that echolalia is an object of study proves that the utterance have meaning to the very researchers claiming that it is not meaningful.

The question for the researcher is not whether echolalic utterances are meaningful, but how that meaning is created. Even in the moment of use, a researcher would only be able to guess the answers to such questions. Insight must come from lived experience such as that of Higashida. For now, it is enough to say that the integrationist understanding of meaning, automatically dispels the concept of “meaningless” echolalia.

6.8.3 Intention

The labelling of echolalic as "meaningless" almost certainly rises from the perspective that echolalic utterances in those with learning disabilities are unintentional. If it is unintentional it is not a choice and "meaningfulness implies choice" (Lyons 1968 p.413). If the 'repetition' isn't a choice, then it doesn't have meaning.

Yet these are complex sounds and sentences being reproduced. Common sense dictates that these sounds, unlike perhaps a cough or a sneeze, cannot be purely unintentional. To suggest so is to suggest that the autistic mind works radically different from the non-autistic brain. Note, it is not that the effect of the echolalia is unintentional, or the meaning of the echolalia, or even that to speak in a repetitive nature is unintentional, it is that the act of producing the speech at all is unintentional.

Yet this common sense argument aside, the integrationist would not condone the assumption that is being made here about the researcher's ability to impute a mental

state (intention) based on behaviour (repetition). It is yet another example of believing that the researcher can see beyond the behaviour, to the psychological components that supposedly underpin it.

Instead the integrationist would support gaining an ad hoc lay perspective on the instance of echolalia. The lay perspective provided above from Higashida openly addresses that question of autistic motive for echolalia, providing that there is intention. To suggest that the researcher can see beyond the view of the communicators themselves is a pseudo-scientific fallacy.

6.9 Integrating the Scientific Study of Autistic Behaviour

The works of Harris, Orman, and Louch were outlined about to identify the fallacy of scientific inquiry into human behaviour. The following discussion will not add to this in the wider context, other than to say in the years since these papers the practices are still pervasive in social sciences such as psychology, anthropology, and linguistics. Instead, the following discussion will attempt to provide a very brief insight into how the scientific nature of enquiry is continuously effecting the field of autism research.

While there is no doubt that this practice is far spread, it is arguably nowhere more present, and more damaging, than it is in the study of so called communication disorders. Communication disorders appear to invite scientific insights attempting to identify the central deficiency. There are many potential reasons for this: the societal repression of disabled people's agency, the involvement of medical (and consequently scientific) professionals in communication disorder diagnosis/treatment/research/funding, the subscription to an individual model of

impairment, or perhaps just that researchers are describing an experience different to their own so a scientific approach gives them the status of expert.

The readily accepted scientific nature of research into communication disorder is symptomatic of the lack of agency these populations hold. Whereas this has demonstrably been prevalent in the “normative” population too, it has been largely unchallenged in populations such as the autistic population. Autistic behaviour is still human behaviour, and scientific study of autism is still exposed to the same critiques seen in papers such as Orman’s in 2018.

Regardless of the reason, the consequence as seen in previous chapters, is the disjointed web of research, opposing theories, and conflicting disciplines. These have created a tangled web of jargon and misconception. In terms of jargon, we see in previous chapters numerous needlessly complex terms allocated to human behaviours that we have relatively common place lay terms for. Echolalia, for example, is a jargonistic term for autistic people repeating what others have said. Accounts of autism refer to isolation, withdrawnness, and a lack of empathy long before the Empathising-Systemising Theory and theory of mind approaches came along. Of course there are subtle differences, but there must be to justify the theory and the jargon’s existence. The actual displayed behaviours of repetitive and lack of empathy can be summarised by lay language. To the integrationist, the fallacy is to believe that the researcher have insight beyond the lay perspective at all.

Arguably, the reason that these multiple theories of autism are created, and continue to exist, is that comparatively few autistic voices are part of the process, so few people are there to challenge the scientific practices. If the researchers associated with the autistic experience, or conversely if the researchers were constructing

theories to describe their own experiences, there may be less need for jargon and complex theories of simple human behaviours.

6.10 Integrating the Linguistic Sign in Applied Behaviour Analysis

Applied Behaviour Analysis, or A.B.A., has been tackled extensively in a previous chapter. While previous chapters refrained from directly drawing upon Integrationist literature, instead preferring to provide a more holistic and open ended linguistic debate, the chapters are built upon a foundation of premises that an integrationist would find acceptable. Yet it would be amiss to not provide a quick conclusion on Applied Behaviour Analysis through the integrationist lens. As already highlighted, A.B.A. is a derivative of behaviourism, relying on the relationship between reward/aversive and behaviour learning. The theory of behaviourism is long since out of favour in a post-Chomskian tradition of segregational linguistics, yet to reject it in favour of other segregational linguistics is replacing one problematic foundation with another. There is a rich body of integrationist thought on behaviourism, and some of that will be summarised here and applied to the subsidiary of A.B.A.

The integrationist stance on what Harris refers to above as the fallacy of verbalism has been discussed at more length above but to summarise, it is the assumption that all signs must operate link works. That a “sign” such as a shrug, can mean something determinable.

On the surface this seems an argument entirely about meaning, while behaviourism and A.B.A. are about language and communication learning. Yet there are significant ramifications the integrationist critique of the fallacy of verbalism on behaviourism.

Harris in his 1996 book “Signs, Language, and Communication” writes:

“[f]or the behaviourist, the fact that x signifies y must be reducible in the end to a relation between stimulus and response.” (p.137).

Harris does not break this down further at this stage, but to do so highlights the simplicity of meaning in a behaviourist model and emphasises how often x must signify y in this model of communication. To adopt this in the context of A.B.A:

- As Harris points out, there must be a binary relationship between stimulus and response: eye contact = reward.
- There must also be binary relationships between eye contact and meaning, in the regard that eye contact must not be contextually dependent, and must be seen to be the same from context to context. Eye contact must always *mean* attention, and always be rewarded.
- There is binary relationship between reward (say verbal praise) and internal reaction to the reward. To the A.B.A. therapist, the verbal praise always must be rewarding, it always must *mean* reward. There is no scope in the model for the praise to be repetitive, patronising, unrewarding. The theory relies on it always meaning reward.

There are more levels to this, but the examples above show the entire approach relies on binary meaningful relationships, devoid of any complication. This a natural inheritance for any behaviourist derivative:

“this relationship [between sign and meaning] allows no room for ‘thinking’ or ‘linguistic encoding’ as independent mental activities, generating ‘messages’ for transmission by the telementation process” (ibid).

The entire process relies on an entirely simplified model. It cannot operate in a model where a sign may mean anything, or an autistic person may integrate signs that are no part of the A.B.A. “process”. Or a where autistic people may take a different meaning from the response. Or where an autistic person interprets the reward or aversive as being related to a differing stimulus.

“Thus we come back to a model with a simple binary configuration, supported by a complex account of the conditioning process which produces the appropriate response to a given stimulus” (p.137-138).

The binary relationship outlined in the fallacy of verbalism is what allows the practice of A.B.A. to operate. Behaviourism is built upon the practice of $x=y$, and A.B.A. is simply trying to adjust what y means to the autistic individual. By changing the response to the stimulus, the A.B.A. therapist believes that they can change the behaviour. Such a confined, scientific approach, cannot possibly entertain the multifaceted, idiosyncratic, and lay-orientated perspective of communication that is adopted by the integrationist. The variables are infinite, the outcomes equally so, this is intolerable to an approach that relies on marketing itself on its results.

6.11 Integrating Autistic Contextualisation

Both existing theories of contextualisation, and perhaps many non-autistic lay perspectives of autistic communication would see an autistic person rocking, waving at a tree, or running their hand under water and use the phrase “in a world of their own” (Baggs, 2007, transcribed for this thesis). Admittedly it is likely that the theories of contextualisation would use sufficient jargon to describe such a lay perspective, as Orman demonstrates is common in the pseudo-sciences. Hence terms such as “executive dysfunction”, or “theory of mind”. Revisiting the earliest autism works

provides the perfect example of this, revisiting the quotes from Chapter One, parents in Kanner's work described their children as:

“self-sufficient”... “like in a shell” ... “happiest when left alone” ... “acting as if people weren't there” ... “perfectly oblivious to everything about him” ... “giving the impression of silent wisdom” ... “failing to develop the usual amount of social awareness” ... “acting almost as if hypnotized” (Kanner 1943, p.250).

While Kanner, as a professional, adopts the jargonistic descriptions of Donald T's contextualisation:

“innumerable verbal rituals”...“irrelevant utterances... were his ordinary mode of speech.” ... “He used the personal pronouns for the person he was quoting.” ... Words to him had a specifically literal, inflexible meaning” ...“Commands or actions that could not possibly be disregarded were resented as unwelcome intrusions.” ... “His relation to people had developed only in so far as he addressed them when needed or wanted to know something. He never looked at the person while talking and did not use communicative gestures.”

Each amounts to much the same thing, what Baggs summarises as being “in a world of her own” or “failing to demonstrate theory of mind and contextualise her communicative behaviours with those of her peers”, the perception is that Baggs is uncommunicative.

But it is an example of the value of both the autistic and the integrationist perspective, understanding contextualisation provides insight way beyond the “ritualistic waving of the hands” and allows the action to be understood as a complex act of contextualisation, in which a person with agency is choosing to communicate with their environment.

Communication and context are at the heart of many of the points of discussion within this thesis. Context plays a major roll in understanding communication, and in turn, but understanding any model of autism that is based on communication. Whether it is conspicuous by its absence, or whether it is underpinned by the language myth, context is a front of autism research which requires attention.

The integrationist takes issue with ignoring context all together, as there cannot be meaning without context, in fact there cannot be a sign without context. Yet neither can the integrationist accept the segregationist, structural models of context that are provided in most considerations of context. There are lengthy integrationist debates about traditional linguistics' various approaches to defining and describing context in relation to the fixed code (for example see Harris 1996, Chapter 10) but to summarise them is beyond the scope and purpose of this thesis. Suffice to say that if a code is fixed, then it does not need context to create meaning, the meaning is already fixed. For this thesis, that is all that is needed. The following is a brief overview of some of the integrationist arguments that are most salient to the field of autism.

Firstly, it is important to establish that the discussion here expands well beyond language. It encompasses all communication, which can encompass all actions depending on how they are integrated. The integrationist does not discriminate in this regard: “[c]ontext dependent devices... are used in all forms of communication” (Harris 1996, p.155) , the following discussion gives no primacy to language, writing, or any other potential vehicle for communication. A perfect example of why this is important is the “My Language” video by Amanda Baggs. A narrower perspective of communication and context could not account for Baggs' descriptions of her communicative acts. For a more detailed view of this case, see the “*The Autistic*

Perspective and Integrationist Lens: Providing a New Perspective of Ritualized Autistic Behaviour in the Diagnostic and Statistical Manual of Mental Disorders” section below.

Expanding the scope of what communication can be is at the heart of Integrationist philosophy. Integration is a dynamic and unique process, that does not need to conform to something as limited as spoken language. Harris gives the following examples of how non-verbal, non-written communication, can be context bound and integrated differently:

“If I think you are pointing to the Dom Perignon in the wine-merchants window when in fact you are pointing to the bottle of Yugoslav Riesling behind it, I may be misled into thinking we are in for quite a different kind of party. If your nudge was supposed to draw my attention to the woman wearing the outrageous hat, but I think it means it is high time we should be leaving, my subsequent behaviour will doubtless puzzle you.”

Already, this gives the integrationist a wider scope for understanding the integration of autistic signs in context. Revisiting Baggs’ discussion of her own communication in context, the traditional treatment of communicative process:

“Far from being purposeless, the way that I move is an ongoing response to what is around me. Ironically the way that I move when responding to everything around me is described as ‘being in a world of my own” (Baggs, 2007, transcribed for this thesis).

To give primacy to verbal, or language coded communication, is to incorrectly interpret Baggs’ communication. In fact, it is to potentially miss that there has been any communication whatsoever. Thus, traditional linguistics which give primacy to

these forms, is not equipped to even begin to have a discussion of context that can incorporate the autistic experience.

Regardless of whether it is Baggs running her hand under water, or Harris' companion choosing a part beverage, there has to be an acknowledgement of the role of context in order to begin to understand the communication.

Chapter 7: Towards a Future of Foregrounding the Lived

Experience

7.1 Introduction

The purpose of the last chapter was to introduce the benefits of integrationist linguistics for the future of autism research. The merits of the integrationist epistemology have been demonstrated both in theory, and in conjunction with first hand published accounts of autism.

Yet it is not enough to merely demonstrate that the integrationist has something to say within their own echo chamber. To do so would only demonstrate a theoretical capability for contribution, but would not advance the case for linguistic contribution to autism research. Integrationist linguistics, for all its differences, would just be another branch of linguistics that is not considered in theories of autism. Thus, the final hurdle is to show that the integrationist epistemology can have a place in modern autism research. That the integrationist can succeed where the segregationist has failed.

The above section, titled “A Quick Note on Linguistics and Autism” demonstrated that traditional linguistics has had limited impact on the field of autism. The present section posits that integrationist linguistics advances this, and identifies at least two criteria for integrationist linguistics to meet to demonstrate its value in the field. The first of these is to demonstrate that integrationist linguistics can contribute towards the creation of new knowledge, rather than just criticising previous works as has been done so far in this thesis.

The creation of new knowledge, and new ways of understanding and talking about autism is essential. The knowledge does not exist in a theoretical and philosophical vacuum. Autism research informs many practices which directly impact on the lives of people with autistic “needs”. Processes from diagnosis, to educational support and intervention, to educating society, all rely on being able to draw from some pool of knowledge. That is not to say that integrational linguistics needs to be responsible for some over-arching definition, or provide any “truth” about autism. It is only to say that the integrationist needs to demonstrate its value within the process.

The second criterion integrationist linguistics must meet is to demonstrate the ability to work collaboratively in autism research. History shows linguistic research has not done this consistently, and consequently had limited impact on the field in general. Some of the reasons have been discussed for this above: see the funding situation discussed in the introduction or the pseudo-scientific nature of the discipline making inter-disciplinary research difficult for example. The history of research proves that linguistic autism research alone cannot stand. Instead there is a growing global demand for holistic inter-disciplinary research. To be part of this future integrationist linguists must demonstrate the ability to be inter-disciplinary.

On this matter the integrationist field is not unprepared. Inter-disciplinary work is an area that the integrationist has considered. Harris (2010) writes about inter-disciplinary work in general that:

“...in spite of lip-service paid to interdisciplinarity, modern academics and their students tend to live inside hermetically sealed worlds, fed by their own journals and publishers, and only rarely dare to set foot outside”.

Each discipline tends to exist within an echo chamber. While there is internal debate on theoretical and methodological philosophy, disciplines still tend to have their own hallmarks of practice and assumption. Where there is inter-disciplinary research it tends to be between disciplines that have shared assumptions which allow for common ground.

Linguistic input into autism research is an excellent example of Harris' "hermetically sealed world". The research does exist, but it tends to have limited impact despite being well placed to address the core concept of communication in autism practice. Perhaps, this is because to invite the linguist to contribute is to be forced to scrutinise assumptions upon which theories of autism have been built. Some areas of linguistics coincide very well with some areas of autism research, see examples in previous chapters such as Chomskian association with modularity and consequently E-ST or WCCT. But overall each linguist subscribes to a philosophy of language, and each philosophy of language forces the researcher to address the beliefs made previous in their body of literature.

A full analysis of the various barriers that each individual linguistic epistemology faces in autism research is beyond the scopes of this study. Yet such an analysis would no doubt expose many of the same critiques found above: the pseudo-scientific nature of some linguistic practices, the belief that any de-contextualised analysis of one autistic person's communication can provide any insight on autistic communication in general, or the prevalence some linguists give to the lay perspective.

Instead, this chapter will focus on the future of the integrationist contribution to autism research. The remainder of this chapter will identify the similarities and

differences between participatory research and integrational linguistics, before proposing that a marriage between the two would be a fruitful exercise for autism research.

7.2 Participatory Research and Autism: A Brief History

In 1969, Sherry Arnstein published “A Ladder of Citizen Participation”, this paper provided an important framework for increasing the participation of lay-person stakeholders in research about their community. Arnstein’s ladder of citizen participation contains 8 rungs. The first 2 rungs have an absence of participation. The next three rungs are for tokenistic participation. The final three rungs are rungs of participation. Arnstein’s work provided the early framework for moving away from entirely researcher-led research, and beginning to elevate the lived experience of citizens.

Participatory research adopts the general early principles from Sherry Arnstein, in moving past the rungs of non-participation, and tokenistic participation, and incorporating the views of the autistic community at every stage of research. The goal of participatory research is facilitating the autistic voice on research focus, research methodology, and research implementation (Cornwall and Jewkes 1995).

Yet despite this emerging way of working, there persist concerns about participation. In the field of autism, there is a demonstrable disconnect between the research community and the autism community (Pellicano and Stears 2011). Participatory Researchers face the task of reducing this disconnect at all stages of their research, and moving towards the final three rungs of participation.

Moving on to the final rungs of participation requires a fundamental overhaul of the power structures that exist between researcher and stakeholder (Nelson and Wright

1995). The ladder of participation provides a framework for this power structure. The stages of participation outlined above, can also be described in terms of power. Ranging from no power, to tokenistic power, to developed power. Elevating the lived experience, means elevating the role of the autistic participant. Research experience, and lived experience, must be on an equal footing. Lack of participation, equates to a lack of power.

Accessibility is a key factor in increasing both power and participation (Pellicano et al 2017). Research must be readily accessible to allow for the widest engagement possible. The removal of barriers at every stage is the only way to ensure that traditional power structures are dissolved. Research environments and methodology must actively remove barriers to participation. Equally language choices, such as researcher jargon, must be limited. The research experience is littered with insider practices, and inside language choices, which must be acknowledged and challenged.

Despite the Ladder of Participation being coined in the 60s, and autism participatory research being around since the 90s, it is not a common practice in the field.

Pellicano et al (2013) found that the prevalence of autism inclusive participatory research is debatable, with researchers believing it to be more commonly practised than autistic stakeholders do.

Researchers must “acknowledge the need to address the everyday realities of autism” by engaging with autistic people at all steps of the research process”

(Pellicano et al. 2018 p.82 in Bertilsdotter Rosqvist 2019 p.2) The participatory movement seeks to prioritise seeking an equal partnership between lived experience

and research experience, in which each party is seen as having its own area of expertise:

"This 'partnering' of researchers with autistic people, together with a recognition of potentially unequal power dynamics between researchers and research participants, is characterised as participatory research" (Waltz 2008; Fletcher-Watson et al. 2018 in Bertilsdotter Rosqvist 2019 p.2).

In short, Participatory Research views it as both epistemologically and ethically problematic if the autistic voice is not heard in the social sciences when researching autism (Milton and Bracher 2013) and participatory research invites autistic people to partner the researcher, with each party having an equal power dynamic. Such an approach elevates the lived experience at every stage of research. From deciding what is important to be researched, to deciding how to research it, to analysing the findings. Participatory research removes the barriers to autistic voices in autism research.

7.3 Foregrounding the Lived Experience

Perhaps the area of most commonality between integrationist linguistics and participatory research is the challenge that each makes of the traditional roles of researcher and lay-person. In integrationist literature, this usually takes the form of challenging linguistic expertise, while in Participatory Research it appears as a foregrounding of the lived experience. These are two sides of the same coin. A dogmatic researcher cannot foreground the lived experience.

The case will also be made here, that over-arching theory is the enemy of Participatory Research. Certainly, the various research projects that have been reviewed in this thesis have proved that this is the case in many landmark autism

papers. The most prominent papers have either been primarily dedicated to identifying the central deficiency of autism, or in the case of Applied Behaviour Analysis, treating autism. In both of these cases, any autistic input that challenges the central belief: whether that be the belief that autism is deficient, or challenging that theory of mind is the area in which they are deficient, or challenging that any autistic traits can be unlearned, are bound to be dismissed out of hand. It is a direct conflict between researcher and lay-perspective, and one that cannot be overcome without the researcher doing some leg work and sleight of hand to dismiss, reinterpret, or marginalise the lived experience presented. Whichever strategy is adopted, the autistic input is necessarily reduced to the status of “data” and not equal input. The autistic experience must fit within the compound of the researcher’s over-arching theory, if it does not fit then the researcher must be able to satisfactorily explain why, dismiss the view entirely, or satisfactorily be able to reinterpret the response to fit.

Meanwhile linguistics and other “social sciences”, as pseudo-science, have also been guilty of the same. Traditional linguistics adopts an immovable philosophy of language. Any autistic input, usually sought in the form of data, must be fit into that philosophy of language with the linguist using a hocus pocus, or god’s truth approach to make it do so. Autistic voices therefore, are being limited before the conversation even begins, as there are boundaries to what lived experience is prepared to be accepted. The linguist may not openly and outright reject any statement, but the linguist will be forced to bend the statement to fit the model of language which they prescribe to.

Chown et al (2017 p.721)) note that:

“it remains the case that the vast majority of research in autism is undertaken on autistic people, rather than with them”.

Thus, much of Participatory Research is about managing to find the balance between the research experience and the lived experience. Yet, proposed below, is the benefit of integrationist linguistics, where no balance is needed. The integrationist researcher need not compromise to accept the ad hoc, lay perspective. The integrationist does not need to balance a researcher’s views with these views, because to the integrationist “everybody is a linguist” (Harris 1998, p.20) and linguistics worth having will be “essentially lay-orientated” (Harris, 1981 p.90).

Nor will the integrationist accept the lay perspective as evidence but impose their own structure or conclusion upon it as though it is data. The lay views will be treated as truth, although with the caveat that it is only the truth for that person, in that context.

“Traditional approaches to science— which typically do not include members of the population being studied in the development of the research— have a history of failing minority communities. Minority communities, in turn, have a history of distrusting researchers” (Raymaker and Nicolaidis 2013, p.169).

The pattern in the history of autism research presented within this thesis certainly supports this statement. Researchers strike out to construct over-arching theories beyond the knowledge that already exists. Manipulating the data in order to contribute towards this effort.

“Participatory approaches to research offer a way to change these dynamics. Instead of viewing a minority population as simply a source of raw data, researchers conduct

participatory inquiries with representatives from the minority group as full members of the research team” (ibid).

The integrationist, does not face the same issues, and will not marginalise the autistic person in this way. The only limit the integrationist places upon the autistic voice, is the limiting the statements to being *a* truth and not *the* truth. The integrationist recognises the truly idiosyncratic nature of every communicative act, and cannot extent an over-arching theory beyond said act. The integrationist will truly accept the autistic lay perspective, but will not assume that each autistic lay perspective would be the same. Other than this, and also because of this, the integrationist can accept any view point. Therefore, the autistic voice is not only able to be taken at face value without compromise, but is also able to be accepted without an underlying power dynamic favouring the researcher.

The “craving for generality”, “pseudo-scientific approach”, and primacy of the researcher that the integrationist inherently unsubscribes from undoubtedly creates a barrier to truly participatory research. Generality requires a researcher with perceived insight of a bigger picture. By necessity, this overseer must manipulate and understand the ad hoc perspectives being given to create such a narrative. The existence of this overseeing expert creates a power dynamic, and participatory research becomes less plausible. The integrationist does not face such issues.

Conversely, there is a popular phrase in participatory autism research circles. Milton and Martin (2017 p.112) quote it thus: “if you have met one autistic person, you have met one autistic person”. Contemporary thinking is moving away from overly generalised, blanket statements and towards recognising the idiosyncratic nature of autism. The pseudo-scientist cannot move in this new direction without

compromising on its core practices. Meanwhile, the integrationist need not compromise and is the best placed linguistic epistemology to compliment this new direction.

7.4 Reflexivity and Jargon

The benefits of the lived experience of autistic people when talking about their daily experiences have been largely explored. The discussion that follows recognises these benefits, but will not merely reproduce them here. Instead, the previously explored benefits of participatory autism research will be set aside, and the discussion explores a new front of participatory autism research. The front that will be explored, is that of autistic ability to analyse their own communication.

Accessibility is a key factor in increasing both power and participation (Pellicano et al 2017). Accessibility, in the context of this study, it is about removing barriers to autistic participation in research. The removal of barriers looks different from discipline to discipline and from study to study. As a theoretical paper, it is impossible for the discussion that follows to be anything other than general.

The concept of lay-participation in autism is an exciting one as autism participatory research holds a potentially unique position. Participatory research can and should be practiced at all levels of research. Such participation extends way beyond autism alone and participatory research should be practiced in research on race, disability, and gender. Also it should be practiced when researching service users, customer experiences, and other societal issues. Wherever research pertains to the life of people, those people should be represented.

Yet there are barriers to this that must be overcome. A lack of ability to engage directly with the subject matter being one of the most prominent barriers.

Considering the pregnant population for example, pregnant women have placentas but not every pregnant woman can engage with a researcher studying the placenta's influence on the exchange of vital substances between baby and mother. Many will simply not have the resources available to engage with that discussion. Therefore the participatory element of research is largely limited to the pre-analysis stages, contributing towards good methodological practice, and research direction.

Yet with autism research this does not have to be the case. Not only can an autistic person contribute to the pre-analysis stages of discussion, but they can contribute to the analysis. That is because many autistic people do have the tools to talk about communication. Or to put it another way, autistic people's linguistic communication can be reflexive. Analyses of communication occur every day, by everybody.

The integrationist covers this point extensively. Languages are filled with everyday reflexive vocabulary. Taylor (2000 p.484) provides the following examples:

- Mean
- Talk
- Speak
- Understand
- Tell
- Nonsense
- Word
- Promise
- Agree
- Say
- Answer

- Suggest
- Refer
- Describe
- Reply
- True
- Explain
- Question
- False
- Ask
- Request
- Name
- Language
- Justify

All these words are used to make a reference to, or assessment of, other language.

The integrationist has written much on this matter. Integrationist's discuss the relationship between first order language, and the second order language that refers to it. The metalinguistic practices that formulate this process. Taylor extends the catalogue of these practices recognising the following common place expressions that allow lay people to talk about language:

- "That's what she said"
- "Yes, that's right."
- "What did he mean by that, anyway?"
- "Why did he say that?"
- "I'm talking about the one on the left"

- “Will you explain that?”
- “Sorry, could you say that again?”
- “What's that called?”
- “Did she understand what you said?”
- “Is this what you're referring to?”
- “What does comely mean?”
- “I'll try to describe it to you.”
- “That's not true!”
- “I don't agree with her.”
- “What's his name?”
- “I insist on doing it this way.”
- “Please don't lie to me.”
- “I believe you.”
- “Promise me you won't go.”
- “Really?”
- “He said he was sorry.”
- “I'm glad to hear it.”
- “She ordered me to leave.”
- “Would you ask him to shut up?”

These practices are not rare, nor are they incidental. The discussions of the role of metalinguistics in wider society do continue and offer much general value. But within the discussion of metalinguistics and participatory research, it is enough to demonstrate that the lay-person is not only equipped with the tools to analyse language, but already does so on a frequent basis. Contrast this to those engaging

in participatory scientific research, where the object of research is often beyond the lay-understanding. Linguistics, and anybody wishing to research communication whether autistic or otherwise, differs from this, which is why:

“For Harris, everyone is necessarily a linguist, because everybody deals with the contextual nature of communication, and thus has some grip on the biomechanical, macrosocial, and circumstantial factors which enable and constrain it. There can be no ‘real’ linguistic facts available to science alone, of which the competent lay speaker could be ignorant” (Sutton, 2004 p.516).

The discrediting of the linguistic expert has already taken place earlier in this chapter. But here is another nail in the coffin of the linguistic expert. Linguistics is merely talking about talking, Nigel Love wrote that (2007 p.705):

“the fact that linguistics is language about language has often made linguists uneasy”.

As demonstrated with the comprehensive examples, above, from Taylor, the lay-person already has language about language. The lay person is equally as capable of using language, to talk about language. Harris sees the language of the field of linguistics, as “an extension of lay metalanguage” (Harris 1998 p.28). The professional linguist is merely using jargonistic terms, to convey concepts already encapsulated by the lay-person’s language.

It is this last point that creates a further connection with participatory research. One large barrier to participatory autism research is jargon (see Hebert et al 2009 for example). Jargon creates a barrier to understanding for any of those not indoctrinated in the field and its inner language choices.

Linguistics is heavily steeped in jargon, but unlike many other fields, the researcher's jargon can be reduced to every day language. Harris writes that:

“professional linguist's jargon of ‘phonemes’, ‘morphemes’, ‘lexemes’, and all the rest is simply an extension of lay metalanguage. It has no other basis. That is why there is no need to stand in awe of It, and why it must, if it is to make sense at all, reduce to concepts already implicit in our lay vocabulary In this respect, it is very *unlike* the current terminology of physics, chemistry, and the natural science: for this latter terminology does *not* reduce to notion already implicit in our everyday ways of talking about the world of nature” (Harris, 1998, p.28, emphases original).

See also the above review by Orman, who also demonstrates that jargon is not a necessity facet of linguistic analysis. In his review of the pseudo-sciences, the integrationist Orman draws on the Louch quote:

‘[the] outrageous vocabulary clothes the essential barrenness of the theory’.

To the integrationist, linguistic jargon is not necessary. The tools for talking about language exist in everyday language. The integrationist recognises “a language” as a second-order construct, used to categorise first-order utterances. In doing so, those who adhere to this, can identify the language traits of a community with little difficulty. Whereas the rejection of this fallacy, allows the researcher to identify that any traits of a linguistic community identified in such a fashion are not necessarily a first-order reality for the individuals in the community being described (Love 1990, p.101).

The consequence of this, is that the integrationist does not believe that the myriad of linguistic jargon terms offer anything beyond the terms offered by the lay population. In this case, removing a barrier for autistic participation in autism research. The

autistic person does not need to learn a new language that describes language, they are already in possession of it. Thus, for a participatory researcher, the integrationist epistemology is well placed for the research of autistic language, as it inherently removes barriers around jargon with no need for change nor compromise.

7.5 Ethics as a Barrier to Autistic Participation

As this thesis is advocating for the inclusion of autistic participants in research, it is important to acknowledge the limitations imposed on this practice by academic ethical procedures. “People with learning or communication difficulties”, which would include the autistic population, are considered vulnerable, and thus are protected by standard ethical procedures in research.

The notion of vulnerability is not well defined, and there appears to be little nuance for contextualising vulnerability when it comes to this population of people. For the rest of the population, vulnerability is often in flux, and is contextually created. One is more vulnerable conducting research in a dark alley at night than one is at their desk collecting data online. Yet for the autistic population vulnerability is something that is perpetual and ever present. Defining vulnerability as such roots the ethical procedure in a medical understanding of autism, suggesting that either autistic people are lesser equipped to deal with *all* situations, or that they somehow create their own vulnerability regardless of external circumstance. In a modern world, with progressive and emancipatory research and a social model of autism being widely used, there must be room for the autistic population’s vulnerability to be defined by context, just as disability is within a social model.

Even if the ethics process does not have room for a social model of autism, there are still issues with default vulnerability from the perspective of a medical model. While

the medical model would subscribe to the intrinsic impairment element of the ethics process, questions can still be asked about the binary nature with which vulnerability is subscribed. This thesis has not subscribed to the concept of an autism spectrum, yet it must be recognised that the spectrum is widely accepted in society. The ethics process has adopted an entirely binary approach to autistic vulnerability, more reminiscent of Kanner's autism. There is no differential approach to vulnerability in autism. No room for "high functioning" autistic people to not be seen as vulnerable. All autistic people are vulnerable. To allow for a non-binary approach to vulnerability would homogenise the ethics process with a wider understanding of autism.

Autistic people's status as "vulnerable" is problematic when aiming for a participatory approach. One barrier that this creates is that autistic people require proxy consent for participation in studies. An extensive discussion of preserving autistic autonomy in research is provided at length in Milton, Mills and Pellicano (2012), but clearly the inability to make their own decisions about taking part in the study is not a good start. It is hard to elevate the autistic person's status in research when they need the permission of others to participate to begin with.

The short discussion provided here for ethics is to highlight one of the barriers to the above approach. It must be addressed both on a case-by-case basis, and with wider reform of the ethics system to allow for a truly participatory future of autism research.

7.6 A Brief Exercise in Combining the Integrationist Epistemology with Autistic Experience

7.6.1. The Autistic Perspective and Integrationist Lens: Providing a New Perspective of Ritualized Autistic Behaviour in the Diagnostic and Statistical Manual of Mental Disorders

Introduction

The integrationist perspective of context is outlined in the “Integrationist Linguistic: A Quick Guide” section above . The implications of adopting the Integrationist Perspective are “Integrating Autistic Contextualisation” section. The below is a brief insight into the value of the integrationist perspective to a lay-based approach to autism research.

As previous sections have engaged with the contextualisation where it is overtly present in accounts of autism, the following discussion seeks to go beyond this and show where these discussions can add value to other autistic description. In this case that is the DSM-5’s autistic diagnosis criterion of:

“Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior” (DSM-5).

In the absence of an active autistic researcher, the below discussion will draw again on the work of Amanda Baggs. Where one quote has been chosen from the DSM-5, one quote will also be used from Baggs, which is:

“Far from being purposeless, the way that I move is an ongoing response to what is around me. Ironically the way that I move when responding to everything around me is described as ‘being in a world of my own’” (Baggs, transcribed for this thesis).

While these are not optimum conditions for truly Participatory Research, steps are taken to ensure that the discussion is as participatory as possible. Primarily, Baggs’ work is not “data”. It is treated how a traditional researcher treats “literature”. In this way autistic perspective is elevated to be equal to both the integrationist lens, and the diagnostic criteria in the DSM-5. There is no need for the integrationist to adopt any approach to manipulate Baggs’ work, nor to categorise or describe it beyond what Baggs has said. Instead the integrationist can holdup two account of autism, place them alongside one another, and discuss the areas in which they differ. There is no agenda to formulate any over-arching theory of either autism or communication, which allows Baggs’ account to stand as its own body of work.

Discussion

Baggs’ account provides insight into beliefs of ritualised patterns of behaviour. “Ritualised patterns of behaviour” both verbal and non-verbal are embedded as a core autistic characteristic in the DSM-5. It is treated as entirely separate to the “deficits in social communication and interaction”, yet Baggs’ account shows that perhaps it should not be so.

Conversation is not seen as ritualistic behaviour, because it is communicative and varied. So sitting down to eat with a spouse and discussing your day, while a routine, would not meet the DSM-5 autistic criteria of being ritualised. Yet running your hand under a tap at the same time every day would undoubtedly be qualify. Baggs’ specifically describes a process of “responding to everything around me”, a process

of communication. Re-contextualising running hands under water, to fit with this description, sees this as not ritualistic and externally meaningless, but as a communicative with the water and meaningful.

To the Integrationist, each instance of a communicative act is different. As the context changes both as the autistic person performs this act, and even changes as they are performing the act. Just as no word replicates its exact meaning, neither does running hand under water represent a direct replication of previous times running a hand under water.

Combining the autistic perspective from Baggs, and the Integrationist principle of contemporality, allows it to become clear that Baggs is engaging in a meaningful, communicative act which is firmly contextualised. Not only is this the case, but the act is evolving, changing, and dynamic in nature, and not merely ritualistic and repetitive. The act is far more similar, in the way that any communicative acts can be similar, to a conversation than the DSM-5 and autism scholars would admit. De facto, running a hand under a tap and a conversation are academically no different. Engaging in running a hand under a tap, to the individual performing the act, is no more ritualistic or repetitive than engaging in many conversations with the same person each evening over dinner.

The terminology used in the DSM-5 is vague and ill-defined. The jargonistic term “ritualistic” is not as clear cut as it may appear. Ritualistic communicative acts are deemed appropriate, as no doubt most autism practitioners would reject the above, citing clear difference between the two examples. Yet, the lay perspective above certainly challenges the decontextualised, meaningless conceptualisation of running hands under water, or waving of hands.

The above does not seek to answer any questions on ritualised behaviours. It is not to say that running hands under water or talking to a spouse are or are not ritualistic. It is merely to demonstrate that any definition of ritualised, repetitive behaviours must eventually engage with discussions of context and contextualisation. The above demonstrates the way the integrationist lens can be used alongside the autistic perspective. One quote from Baggs, with a basic introduction of the integrationist philosophy of context, can challenge something as well established as the diagnostic criteria.

Chapter 8: Conclusion

8.1 Introduction

The thesis will conclude with broad strokes of what it has achieved, and how the approach it posits can be carried forward. The strokes are broad so as not to fall into the trap of limiting the potential of this new direction in autism research. It is not the purpose nor desire of this thesis, to direct the future of this field.

To align more closely with participatory principles, the conclusion will align what has been achieved in this thesis with quotes from autistic people. In doing so, it will be show the close allegiance between this thesis' contribution and the voices of the autistic population.

The conclusion is broken down into the three research questions posited in Chapter 1. A summary of what the thesis contributed towards the answering of each question.

8.2 Summarising Answers to the Research Questions

8.2.1 “To what extent is there a working understanding of

“communication” in autism research?”

In short, there is very little in existing literature to demonstrate an understanding of communication that goes beyond a passive lay understanding. Of the seminal autism papers identified, every single one mentions communication or social interaction in their analysis of autism. Yet not a single paper directly addresses the question of “what is communication?”.

Of these papers, very few have even a passive grounding in theory that lends itself to explaining a little of what is meant by communication. Arguably the one that does is Lovaas' Applied Behaviour Analysis which is rooted in behaviourism. From A.B.A.'s application of operant conditioning, it is possible to draw certain conclusions such as communication extending beyond language to include gaze / eye contact. Yet more importantly it is understood that Lovaas' believes communication to be largely a product of environment. Yet all this is to be unearthed by understanding A.B.A.'s roots. Lovaas does not explain this in his paper, nor does he engage with any of the critiques of the behaviourist approach to language learning such as the works of Noam Chomsky.

Owing to the lack of engagement with linguistics theory, each paper is building its conclusions on an unacknowledged personal understanding of what communication is. Each researcher does not challenge their own assumptions about communication, nor are they able to describe communicative experiences beyond those that they experience themselves.

Lay understanding is to play an important role in autism research, but the personal understanding of these researchers are already shaped by the theoretical models of other psychology which form the basis of their research. For example, an academic who subscribes to the theory of mind approach, must believe that communication is a transfer of knowledge from one mind to another, and cannot believe that communication can incorporate Amanda Baggs' communication with water or a tree. A truly lay understanding cannot come from somebody who is attempting to form research that includes the concept of communication, even when understanding of communication is taken for granted.

To answer to what extent there is a working understanding of communication in each paper, the result must indicate that there is not one. All knowledge of communication is assumed, and there is a total absence of theoretical engagement with any work from linguistics or philosophy that would help to form the basis of a theory of communication.

8.2.2 “When existing beliefs about communication in autism research are challenged, how does this effect the resultant conclusions about autism?”

Through challenging these assumptions about communication, questions have been raised over the conclusions that past papers have made about autism. While each researcher has conducted research with an assumed model of communication, their results are a house built upon sand. When the definition of communication is challenged, so are the conclusions that are drawn about autism.

In most cases the very definitions of autism itself has been brought into question, as the definition relies so heavily on defining autism in relation to communication. This thesis has argued that you cannot define an entity in relation to another undefined entity.

In other papers methodology has been called into question. For example, the theory of mind approach and the false belief Sally-Anne task. The researchers had underlying beliefs about communication being a matter of one mind speaking to another, with no room for the impact of a wider contextualisation. Thus, the researchers cannot consider that autistic people may draw on elements from outside

their rigid criteria when answering the task's questions, such as past experiences, or their beliefs about the researcher's intentions.

In case of Applied Behaviour Analysis, the impact of questioning understanding of communication falls on its autism treatment. A.B.A. is built on the understanding that operant conditioning works. As such, it theoretically need to engage with the critiques of operant conditioning and wider behaviourism. To fail to do so is not only to lack academic rigour, but it is to have constructed a practice which has outdated theoretical support. While A.B.A. may continue to be a marketable product in some areas, academically it lacks a robust theoretical position of communication, which is able to stand up to academic critique.

All the above does not aim to dissolve all knowledge of autism up to this point, but rather to challenge the theory upon which this knowledge has been built. Therefore, and the importance of this cannot be overstated, it is the academic understanding that is being challenged in this thesis. The understanding of autistic individuals who identify with any one of these theories is not the subject of critique in this paper. The conclusions analysed in this thesis of autism *can* be correct for any one individual. Anybody whose experiences align with a particular description is not being challenged on their own experiences.

What is being said is that when communication is challenged, and theories are being critically analysed is that these theories do not *have* to be correct for all people. It is the prescriptive nature that is being dissolved. Proving that there are holes in each theory is to prove that they are not inherently correct. Thus autistic experiences outside academic autism theory are perfectly valid. Instead of being viewed as an exact science, it would be more beneficial to the autistic community that knowledge

exists as something that can be subscribed to where helpful, and not as a prescriptive markers than marginalise some within community.

Many autistic people have found personal understanding in the works that currently exist. For these autistic people, the research has been a focal point in their own personal journey of understanding and they should not be robbed of this. To challenge these papers, is not to challenge the individual journey and understanding of any autistic individual.

But for those who have not identified with past research, and those that feel they do not belong within traditional autistic communities as a result, it is crucial that these papers are not seen as scientifically defining what autism is or what it can be. Each autistic person knows how they see the world, and neither this paper nor any other can change that:

“So how do people with autism see the world, exactly? We, only we, can ever know the answer to that one! Sometimes I actually pity you for not being able to see the beauty of the world in the same way we do. Really, our vision of the world can be incredible, just incredible ...” (Naoki Higashida).

8.2.3 “How can an integrationist philosophy of communication be balanced with an autism led participatory approach to create a new future for autism research?”

It is acknowledged that an integrationist approach can be criticised for merely being critical and not providing any pathway towards further knowledge. Consequently, this thesis finishes by proposing integrationist linguistics as best placed to contribute towards a future of participatory approach which foregrounds autistic voices at every

stage of research. It has not been the purpose of this thesis to contribute any new knowledge pertaining to autism. Instead, the focus has been firmly on creating new discourses about the way that researchers strive towards the creation of this knowledge.

Integrationist Linguistics holds a valuable linguistic position in that it can allow for individual's to have their own experiences, their own interpretations, and for them not to be challenged. There is no over-arching theory to that must be adhered to. If an autistic person believes that the Empathising Systemising Theory best describes their experiences of being autistic, then the integrationist respects their freedom to describe their experiences in that way. But equally, the integrationist respects the right of other autistic people to reject that theory entirely. That is what integrationist linguistics can offer the field. Thus theories cannot be over-arching and dogmatic. Instead they have to exist in the world as discourses, discourses with which people both autistic and otherwise can integrate their experiences with as they see fit.

“I think that people with autism are born outside the regime of civilization. Sure, this is just my own made-up theory, but I think that” (Naoki Higashida).

Such an approach may be accused of being ill defined, or vague. Setting aside the well documented integrationist beliefs about theories and truth, it is enough to accept that this is the only way in which theory cannot stand in the way of participatory research. Any dogmatic theory draws parameters that limit the lived experience. The lived experience must, in some way, adhere to the theory to be of use. The adoption of integrationist epistemology challenges fallacies that create barriers to autistic people finding their own understanding of both their own experience, and any wider autistic experience.

The discussion provided has encouraged a move away from large, over-arching, sweeping statements about autism. It has challenged conclusions that gatekeep the autistic experience, and acknowledged the truly idiosyncratic nature of autism. Such an approach may seem to be an echo of Wing's move towards an autism spectrum. Yet Wing's approach still operates using two hallmarks of prescriptive ideology.

If a researcher is conducting a normative analysis of another individual based entirely on behaviour, then autism can only exist in a world of central autistic traits and over-arching theories. Yet it is hard to see a future in which this is not the case. Not only autism, but most neurological and psychological syndromes have been identified in this way since the dawn of psychological and medical practices. It can even be said that such practices are embedded even wider, with every day understandings, and social analysis of emotions, otherness, mental states and so forth. While these are not "expert led", they re-establish the norm of the external analyst, making guesses on internal states based on external behaviour. The difference is perhaps that the lay perspectives mentioned above are not as culturally significant or pervasive due to a lack of perceived expertise.

The above statements may sound problematic. Without these structures, without these experts, and without their tools of research, how does the understanding of autism advance? How will society better understand and support autism?

Only the autistic person can circumnavigate the drawbacks of basing understanding off behaviour alone. Only the autistic person can provide insight to the internal. Obviously there are pitfalls here also, such as the autistic person must use systems of communication to communicate their understanding, meaning that understanding is limited by communication.

“When there’s a gap between what I’m thinking and what I’m saying, it’s because the words coming out of my mouth are the only ones I can access at that time.” (Naoki Higashida).

Furthermore, the autistic person understanding the experiences of others, whether autistic or otherwise, with which to compare and describe their autism. But there already exists an understanding of these limitations both in integrationist linguistics, and in society. Autistic author Higashida writes:

“For us, you see, having autism is normal -- so we can't know for sure what your 'normal' is even like. But so long as we can learn to love ourselves, I'm not sure how much it matters whether we're normal or autistic.” (Naoki Higashida).

Daniel Tammet agrees:

“There is no such thing as an average person. They really are guidelines for people to grapple with the unknown, and we can always surprise expectations.”

Furthermore, there are those voices that will be hard to foreground, and even harder to interpret for those with different experiences. Those that are not verbal, and unlike Amanda Baggs, have not found a medium of communication that would be described as “in your language”. Those that do not have a method of communicating the complexity of their experience in a manner that is accessible to others. Also those that do not wish to share their experiences, and those that it does not occur to share their experiences. Tammet himself acknowledges:

“It was hard for me to find my voice because I was, for so long, absorbed in my own world.”

What is being proposed is not a perfect methodological approach leading to a well-defined truth about autism. It is not a science. While that may be a source of frustration to those looking for concrete answers, this thesis has taken steps to demonstrate that a scientific approach to autism also has its limitations. A scientific approach can only engage in participatory research to an extent. A scientific approach must create over-arching truths, which inherently isolate members of the autistic population who do not associate themselves with that truth. A scientific approach must draw conclusions beyond that which can be observed to arrive at such truths. There is a place for science, but the challenging of a scientific approach towards autism is essential to de-mystify the field.

Integrationist Linguistic is a ready-made solution to many of the problems in the field. It overcomes many of the barriers to linguistic participation in autism research that traditional (segregationist) linguistics has faced. It fulfils the need for some linguistics input into a study of what is described as a communication disorder. It allows for an epistemology that is accepting of the lived experience, thus allowing for inter-disciplinary research opportunities with Participatory Researchers.

Principles of participatory research, combined with the expert-sceptic approach to communication found in integrational linguistics, can provide the space for a flexible, non-pseudo-scientific approach to autism that increases inclusion. There is room both for academic rigour, which allows for the building of a future in which autism is better understood and integrated into society. But there is also room for individual understanding and belonging. It is the hope that this thesis' proposed future contributes towards striking this balance.

“I want the word “autism” to provoke an image of a wonderful and unique person.”

(Amanda Baggs)

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