

**Talking together at the edge of meaning:
Mutual (mis)understanding between autistic
and non-autistic speakers**

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Abstract

A central diagnostic and anecdotal feature of autism is difficulty with social communication. Traditionally, these difficulties are regarded as autistic impairments, related to proposed cognitive and social deficits. From this perspective the onus of failures in mutual understanding is placed within the mind/brains of the autistic individuals involved. However, recent research in the social sciences and critical autism studies is beginning to demonstrate that non-autistic people have challenges in understanding autistic people too, and to reframe the communicative difficulties as a two-way *double empathy problem*.

A survey of the literature reveals the need for further empirical investigation of the proposed double empathy problem. This thesis builds on contemporary studies examining intersubjectivity between autistic and non-autistic people, and moves this research into the domain of cognitive linguistics. It explores, theoretically, whether relevance theory (a cognitive account of utterance interpretation) might help make sense of what is happening pragmatically during these breakdowns in mutual understanding. It also examines whether a radical reframing of these breakdowns as akin to intercultural problems might provide any valuable insights.

The thesis begins with an interdisciplinary literature review that outlines the central constructs and themes contained within. To begin, the thesis presents an overview of autism research, covering both traditional biomedical theories and more recent phenomenological perspectives informed by the neurodiversity paradigm. Autistic minds are considered as autistically embodied agents navigating a social world comprised of non-autistically shaped norms. Relevance theory is then introduced within the wider context of cognitive pragmatics, and its application to interactions across dispositional borders (i.e. between autistic and non-autistic individuals) technically explored.

The second half of the thesis reports on and discusses the results of a small-scale linguistic ethnographic case study. Eight core autistic participants engaged in three naturalistic conversations around the topic of loneliness with; (1) a familiar, chosen conversation partner; (2) a non-autistic stranger and (3) an autistic stranger. Relevance theory is utilized as a frame for the linguistic analysis of the interactions to investigate where mutual understanding is and is not achieved.

There is increasing acknowledgement of the importance of autistic stakeholder involvement in autism research. In order to bring my own autistic insights more centrally into this work, I have taken an autoethnographic approach. This method draws on the lived experience of the researcher as a member of the group being studied, and as such offers an emancipatory mechanism for raising up previously marginalized voices.

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Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed (digitally due to Covid-19):

Gemma L. Williams

Dated: 29th October 2020

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For my vicious and kind, serpentine guide: Medusa.

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Several parts of this thesis have been published as articles (in part or in full) and book chapters. I would like to thank the publishers for their permission to include them here, and to acknowledge their presence. Section 2 of Chapter X has been published in an edited form as a chapter in the Neurodiversity Reader (Williams, 2020b), entitled 'Perceptual deviants: understanding autistic subjectivities in a (not so) predictable world'. The extended piece of ethnographic creative non-fiction in Chapter R, 'We're All Strangers Here' was published in Anthropology and Humanism journal (Williams, 2020a), and parts of an article published in Research For All journal, 'From anonymous subject to engaged stakeholder: Enriching participant experience in autistic-language-use research' (Williams, 2020c) may be found in Chapters C, M and R. Finally, two papers presenting the theoretical and empirical findings of this doctoral work that have also utilised sections from this thesis are currently in preparation or under review (Williams, forthcoming, and Williams, Wharton and Jagoe, forthcoming).

Chapter A: Introduction

1. Cross-pollination

Some of the most delicious and delicately-flavoured honeys I have ever tasted are those produced by wildflower-foraging bees. Commercial beekeepers often locate their hives close to a specific flowering crop in order to achieve a precise flavour and quality, such as with eucalyptus honey, acacia, or manuka. These single flower varietals allow for reliability and uniformity of colour and texture—highly beneficial when selling a product—and high degrees of specificity across a range of flavour profiles as wide as there are flowering plants and trees.

However, monocrops do not always lead to success in the apiary. Honey made from the nectar of the vast oil seed rape fields that bloom beside our motorways quickly crystallises in the hive, coagulating in the waxen cells so that it becomes difficult for the beekeeper, and even for the bees themselves, to access. Sometimes there can be too much of a good thing. A multifloral honey represents a symphony of complementary floral notes, together documenting the unique story of a single hive. While the presence of any given floral nectar may be more diluted, the honey is no less sweet, no less rich, no less potent in its health-giving properties. What is lost in particularity is more than made up for in richness and breadth.

For a thesis submitted as partial fulfilment of a Linguistics doctorate, a lot of time is spent in the coming pages *not* talking about language. The problem of minds and other minds dominates, and is approached via an array of angles; from the cognitive sciences, psychology, sociology, linguistics, neuroscience, anthropology and philosophy of mind. It is only by the third chapter (Z) that pragmatic theories of utterance interpretation are properly introduced. But the broad sampling here is purposeful. Each of these perspectives have something unique to add to the understanding of human verbal communication. In taking short flights between each, work is done to undo some of the ‘disciplinary disintegration’

(de Jaeger and Di Paolo, 2008: 33) that has resulted in academic ‘silos’ in the (social) sciences (Milton 2018a; Stirling, 2014), which, in turn, act against flow.

I do not claim to have expertise in all of the areas above; far from it. But what I can do is draw on the relevant literature from each of these different—but related—disciplines and suggest where they might complement one another in addressing the research aims of this thesis. As a bee, I have dipped into many different flowers, carrying the pollen on my back and on my legs deep into the hive where it has been blended and distilled into (what I hope is) a smooth and rich, wildflower honey.

2. The thesis as a response to a need

There are a number of ways in which this thesis responds to gaps that have been identified in the literature, both in terms of research focus and methodology. First and foremost, language and communication in autism is a key area for research. Despite now being ‘relatively little studied’ (Happé and Frith, 2020: 12), issues around autistic communication were identified as a top priority for autism research by stakeholders in an independent James Lind Alliance Priority Setting Partnership priority-setting report (Cusack and Sterry, 2016: 6). Aligning research with the needs of stakeholders is essential if we want outcomes to be genuinely meaningful (Chown et al., 2017; Milton and Bracher, 2013). For example, an earlier review of autism research by Pellicano, Dinsmore and Charman (2014) included qualitative engagement with autistic people, their family members and autism practitioners around their own priorities for research and compared this to autism research trends. The researchers found that:

there was a clear disparity between the United Kingdom’s pattern of funding for autism research and the priorities articulated by the majority of participants. There was general consensus that future priorities for autism research should lie in those areas that make a difference to people’s day-to-day lives. There needs to be greater involvement of the autism community both in priority setting and in research more broadly to ensure that resources reach where they are most needed and can make the most impact (Pellicano, Dinsmore and Charman, 2014 : 756).

Having discovered, in the James Lind Alliance report (Cusack and Sterry, 2016) that communication was considered a matter of high import among those whom it affects, it was concluded that:

research is needed to understand the effectiveness of interventions which are currently in use, and to develop new and innovative interventions to give autistic people the communication skills they require to navigate the world and live as independently as possible (Cusack and Sterry, 2016: 6).

While interventions and communication aids are undoubtedly valuable resources for many autistic people and their families, this emphasis on ‘interventions’ indicates a perspective that inherently pathologises. Within this framework, there are problems with autistic language use that need to be treated. Autistic communication requires ‘augmentation’ by ‘devices’ (as outlined in the National Institute for Health and Care Excellence guideline response stated in the report: Cusack and Sterry, 2016: 6) so that mutual understanding may occur. This thesis aims to address those difficulties in communication experienced by autistic people and their interlocutors, but to do so by radically reframing what has for so long been considered ‘disordered’ autistic language use. In this way, although tangible, testable ‘interventions’ may not be immediately produced as a result of this research, the issues at the core of the communication breakdowns will nevertheless be thoroughly investigated, and in an emancipatory manner. Emancipatory, because I am also autistic. One aim of this work, then, is to bring my own ‘insider’ autistic insights to bear onto the ‘problem’ of communication in autism.

Bringing the autistic voice into the academy and, specifically, into autism research is an additional issue of current interest and a further way in which this thesis contributes. Coproduction with autistic stakeholders and autistic scholarship are increasingly recognised as bringing vital insights (see: Pellicano et al., 2020). As Walker (2019) explains:

the bulk of the misguided theories and harmful practices around autism that have been generated within the pathology paradigm seem to originate in misinterpretations of the surface behaviors of autistics, based in a lack of awareness of these factors and lack of understanding of subjective autistic experience (Walker, 2019: 44).

In their recent career retrospective paper, leading autism theorists Happé and Frith (2020) also conclude with the assertion that future autism research ‘requires collaborative approaches...with the very diverse autism community’ (Happé and Frith, 2020: 11), in order to ‘ensure that autism never becomes just a variable in a spreadsheet’ (Happé and Frith, 2020: 12). Commenting on Happé and Frith’s (2020) paper, Pellicano (2020) picks up on this point and underscores the potential value of participatory methodologies:

Involving people who draw on their own lived experience to help us think outside the ‘normative’ box could also have far-reaching and disruptive effects on basic autism science – work examining the fundamental building-blocks of autism (Pellicano, 2020: 233- 234).

This thesis, uniquely, undertakes a theoretical cognitive linguistic analysis of autistic language use from the perspective of someone with lived experience. In so doing it hopes to ‘disrupt’ fossilised ideas surrounding communication in autism, and contribute a fresh, subjectively-informed (but no less rigorous) investigation.

3. Autoethnography

Throughout this thesis you will find sections of writing that diverge from the ‘typical’ academic style: one that is characterised by a more formal written register, technical terminology and a formulaic structure. At times this atypical voice takes up just a few lines, while longer sections seek to illustrate, echo or foreshadow what has been—or will shortly be—explored theoretically. In Chapter R this voice crescendos into a short work of

ethnographic fiction: an evocative writing method that carefully merges the ethnographic representation of social life with creative, literary devices (Hecht 2006: 8).

This thesis stands in the tradition of analytic autoethnography (Anderson, 2006): that is, a methodology of ethnographic research where the researcher is ‘(1) a full member in the research group or setting, (2) visible as such a member in published texts, and (3) committed to developing theoretical understandings of broader social phenomena’ (Anderson, 2006: 373). A justification of why this research counts as a form of ethnography, and greater explanation of autoethnography itself is given in Chapter M. For now it is simply to introduce the idea that these complementary sections of text will appear throughout.

The autoethnographic writing in this thesis takes the form of a ‘layered account’ (Rambo Ronai, 1995), a method whereby the writer may ‘incorporate multiple voices including theory, subjective experience, fantasy, and more to convey aspects of a topic at hand that would be otherwise excluded from a more traditional format’ (1995: 563). In permitting the various voices I have (as researcher, autistic, theorist, observer...) to ‘zoom backward and forward, inward and outward’ (Ellis 1999: 673), my hope is that the work overall will be far richer. The inclusion of the occasional, personal, autistic voice within a work that investigates mutual understanding between autistic and non-autistic people feels essential.

These more personal, creative layers, then, are included as alternative means of conveying what it is that is under the lens. In the same manner as the ‘clinical vignettes’ that are sometimes provided at the start of psychological research papers (e.g. see: Dvir et al., 2020; Mössler et al., 2020; Siminoff, 2020), though perhaps in an inversion of the form, they are there to add nuance, to personalise, and to reflect the ineffable. They are there to challenge the norms surrounding the way in which scientific studies are presented and, as such, function as one means of bringing form and content a little closer together. They are there to bring the autistic voice into this work, and through this work, into the academy. You will find them with ease: they are in a different font.

4. A constellation of concepts

In the final few months of my PhD registration, with autumn light breaking through the rainclouds and into the window of the small 'Fridge Room' where we were all sat, my supervisors posed me a question:

"Are you planning on leaving the chapter title names as they are?", one asked me.

"It may make it...harder...for the readers if you do. You might want to think about whether that's something you want..." the other agreed.

Years earlier, in the months prior to starting my PhD, but having already received my place to study, I'd spent hours, lying flat on my stomach on the scratchy jute rug on the living room floor, drawing elaborate diagrams in an oversized, spiral-bound, hard-backed sketch-book. I made illustrations, coloured in water-colour pencil, of new concepts I needed to get my head around (*intersubjectivity; Umwelt; the predictive mind...*). I wrote out key references, in my best handwriting, marking out relations between ideas with thick, glitter-tape arrows.

Like anything else I've made, from the outset this thesis has held a vague shape somewhere in my mind: a cluster of inter-related points, suspended together in a form that is almost tangible. *Almost*. The task has not so much been to chase down ideas and join them together, as it has to correctly replicate something in words that already existed in nebulous form. The reviewing of literature, the deepening of knowledge, the collecting of data; all of this working together to chisel and refine until the thesis-shape was translated into a real-world document that would suddenly make its content comprehensible. It's not that I knew how it would look at the end, rather that I knew it had its own architecture and that I was simply the builder.

As the work began proper, and it moved onto a computer, I began naming these clusters with letters of the alphabet that most intuitively represented them. X, F, C... How could I number points of a three-dimensional shape as if it were linear? For a start, how could I possibly

know where it might end up in terms of a numerical order until it was fully embodied? Most logical, then, was to name the clusters as they came, as they were, then comb through the final draft with the find-and-replace function to retitle all the signposts.

But as I came towards the end of writing up, to re-name as I'd planned seemed increasingly as though to disempower myself. To 'mask'. To edit out the autistic logic and to make it more passable, more normative. Paper after paper I was reading near the end of my PhD gave explanation for the terminology used to describe the autistic people under its gaze, whichever it chose. "Words matter", authors were claiming. I felt less and less inclined to change my words to make them more normal, to make them flatter. Wouldn't it just make me hypocrite if I did?

But my supervisors were correct: if I intended to keep these unwieldy alphabetical titles I could not simply do so without some justification. I thought about this for a short while, but I already knew what I'd say...

The underground river pulsing below these chapters is the belief that the minds of autistic people are populated by patterns of salience that often don't easily match those of the people around them. If this is the case, then for the autist, communication always relies on some background act of translation or a more effortful search for relevance. Sometimes this is effective, sometimes it isn't. But it is invariably autistic people who are ones expected to function according to ways of organising (and perceiving) concepts that do not necessarily come naturally to them.

Keeping the cluster (or, 'Chapter') titles as I have, is not intended as an act of hostility. But if it disconcerts a little, or demands some extra cognitive effort to achieve the desired effect (i.e. orientation around the thesis), then I ask my readers to bear with me. I am not demanding these extra efforts in vain.

This thesis, you see, has a dual purpose. First and foremost it is an intellectual contribution to a canon of academic work. Yet it is also an

object with a ‘political’, for want of a better word, intent: the intent to upend norms, to flip perspectives, to shift power.

If the pathway through it feels a little awkward or a little crooked, it may give some small insight into how it is to navigate a world that feels *almost* right but never quite.

To make your travelling easier, I have included a map in the form of a bookmark.

Welcome to the fascinating shape that has possessed me for many months.

I hope it’s an enjoyable experience.

In the first chapter, Chapter X, autism as a construct is introduced and explored as a phenomenon from a range of perspectives. Key studies that have informed our conceptualisation of autism are outlined before an alternative position is offered up, informed by recent developments in neuroscience and the neurodiversity paradigm. Chapter Z introduces relevance theory (Sperber and Wilson, 1986 /1995), the central analytic theory of this thesis and provides some context for the study of meaning and utterance interpretation.

Chapter C moves the discussion more specifically into the area of autistic language use, detailing previous empirical work investigating autistic communication and exploring what it means to ‘have a voice’. In the second half of this chapter a relevance theoretic account of the breakdowns in mutual understanding that can sometimes occur between autistic and non-autistic people (otherwise known as the ‘double empathy problem’: Milton, 2012b, 2020; Milton, Heasman and Sheppard, 2018) is put forward. Chapter F extends the theorising around the gaps that can occur between individuals with different cognitive dispositions, and

draws on English as a Lingua Franca as a useful working example of how such gaps can be bridged.

Chapter M begins by detailing the methodology underpinning the empirical aspect of this thesis. The hypotheses that have been reached via a synthesis of the literature reviewed in the previous chapters are outlined here along with the methods used to acquire and analyse the data. The ‘Talking Together’ project is introduced and the rationale behind its central focus (loneliness) explained. Chapter R follows, firstly, with an overview of the qualitative content that emerged from Talking Together alongside the raw linguistic data, extending a discussion of ‘ethical loneliness’ (Stauffer, 2015) and what this might mean for autistic people. The second part of this chapter provides an in-depth linguistic analysis of the transcribed conversations, drawing on theories provided in earlier chapters. Finally, Chapter D reflects more broadly upon the linguistic findings and offers interpretation in the wider context of autism research. The strengths and limitations of the empirical part of this thesis are reviewed, and in the final pages the novel contributions that this thesis has made are presented.

Chapter X: Firstly, what is ‘autism’?

Despite its increasing prevalence and recognition—more than one in 100 people in the UK¹ are known to be autistic (The NHS Information Centre, Brugha et al., 2012)—the medical, social and neuro-sciences have yet to agree on what autism actually is and what causes it. Is it a distinct ‘thing’ at all, or a collection of many things? Is it a disorder or a disability? ‘A form of estrangement from social expectation’ (Fein, 2018: 130), or just one expression of a greater human *neurodiversity*?

One main factor clouding the issue is its heterogeneity: the manner in which autism manifests in one individual is often quite different from the manner it does so in the next. Genes, failed theory-of-mind modules, different cognitive styles and structural brain abnormalities have all been offered up as an explanation of autism across the years (see Fletcher-Watson and Happé, 2019 for an up-to-date overview), yet the essential root of ‘autism’ remains elusive. Its construct validity, already precarious on account of the medical / social model of disability gap, is made all the more so by this competition among incomplete theories.

In order to provide a context for this investigation of autistic language use, this chapter offers a critical overview of proposed explanations for, or descriptions of, autism. The breadth of epistemological and methodological stances which form the bases of the various proposed theories makes the terrain both rich and murky. Section 1 of this chapter outlines the conceptual roots of autism as a disorder through to the more recent framing of it as a neurological difference. Section 2 draws on contemporary theories of the embodied, enactive mind to provide context for divergent subjectivities. My hope is that by the end of this

¹ One in 100 is still the most frequently quoted figure, but based now on aging data. Some more recent studies indicate the incidence may be even higher, such as Baio et al. (2018) who use the figure of one in 59.

chapter we will have arrived somewhere closer to a viable and wieldy synthetic theory of autism that will comfortably frame this research.

Before this chapter takes full flight, a brief note on terminology. There is much debate and lack of consistency around the language used to talk about those people for whom this topic is most relevant. There is a passionate divide (see Brown, L., 2016; Kenny et al., 2016; National Center on Disability and Journalism, 2018) between the use of ‘person-first language’ (*a man with autism; a person with Asperger’s, etc.*) and ‘identity-first’ language’ (*an autistic girl; an autist, an Aspie, etc.*). Throughout this thesis, in accordance with the preferences expressed by autistic self-advocates and their allies (Botha, Hanlon and Williams, forthcoming; Kenny et al., 2016), and according to my own preference as an autistic individual, I shall be using identity-first language. This choice does not imply a negative judgement toward individuals with autism referring to themselves as such, if this is their wish, and I have endeavoured to reflect terminology choices of individuals or participants described or quoted throughout, should their choices diverge from the primary style of this thesis.

Finally, autism is most definitely an international phenomenon (see Grinker, 2016 and Fein and Rios, 2018). How autism is defined and interpreted around the world is a fascinating and crucial area of study. This thesis, however, is limited to autism as it exists within what might be called a Global North setting. It is, arguably, a shortcoming that the majority of autism research and the dominant autism discourse are situated within a white, developed world. This, however, is the primary body of work in which the literature review of this thesis takes place, and the socio-geographic context in which my own data is gathered. Whenever something is said, generally, about autism throughout the following pages, it is also with this caveat attached, and with the wish that more research both about and by autistic people of colour, and from the Global South and East might become more prevalent in the coming years.

1. Theorising autism

We find ourselves amid a sea change in autism studies. Over the past three decades, during which time interest in autism as a field of research has boomed (Interagency Autism Coordinating Committee, 2013; Pellicano, 2014), a huge shift has occurred in terms of how autism is defined (Happé and Frith, 2020). Autism has evolved from being considered as a rare childhood disorder, more prevalent in males than females, associated with intellectual impairment and with one assumed cause to now being seen as lifelong, much more common, more equally distributed across the genders and with a potentially broad and blended aetiology (Happé, 2018; Happé and Frith, 2020). Not only that, but there is a growing awareness of the importance of stakeholder-led research (Happé, 2018; Happé and Frith, 2020), as evidenced by the increasing emphasis on participatory research methods (see: Fletcher et al., 2018), and published work (co-)authored by autistic scholars.²

As such, theories of autism can be divided rather neatly into two broad categories; those that frame it as a disorder, and those that conceptualise it as a difference. While the hypothesis motivating this research is rooted in the latter camp, this chapter aims to provide a summary of *both* approaches in order to provide fullest context. There will also be some clarification required in terms of what is meant by autism as a ‘difference’: this will follow, in Section 1.2.

The way in which autism has been conceptualised has had a large impact on how autistic individuals both see themselves and are seen in the world. How we see ourselves, and are seen, shapes our manner of relating both in the world and to others which, in turn, affects how we communicate. So, in addition to providing a context for the defining of autism, this chapter will also serve to form a basis from which an investigation into autistic language use

²Including (autistic authors are italicised): *Arnold*, 2012; Bargiela, *Steward*, and Mandy, 2016; *Botha*, *Hanlon* and *Williams*, forthcoming; Broderick and *Ne’eman*, 2008; *Chown*, 2014, 2016; *Dawson*, Soulières, Gernsbacher and Mottron, 2007; Gernsbacher and *Yergeau*, 2019; *Graby*, 2015; *Hillary*, 2020a, 2020b; *Hughes*, 2012; Kourti and MacLeod, 2018; *Milton* 2012a, 2012b, 2014a, 2014b, 2014c, 2017a, 2017b, 2017c, 2018a, 2018b; *Milton*, Heasman and Sheppard, 2018; *Milton*, Martin and Melham, 2016; *Milton* and *Moon*, 2012; *Murray*, *Lesser* and *Lawson*, 2005; *Prince*, 2009; *Sinclair*, 1993; *Stewart*, 2012; *Walker*, 2019; *Walsh*, *Delmar* and *Jago*, 2018; *Woods*, *Milton*, *Arnold* and *Graby*, 2018; *Yergeau*, 2013, 2017.

can embark. This chapter will begin (Part 1.1) with autism as a disorder and end (Part 1.2) on a more positive note, with the neurodiversity movement and autism as a neurological difference.

1.1 Autism as a ‘disorder’

Most of us have been trained to think about autism using a deficit model. Such a model, which focuses almost exclusively on impairments and limitations, ultimately leads us to see autistic individuals as broken people who are ill and, as my child’s first psychologist explained, need to be fixed.

(Nicolaidis, 2012: 503)

The term ‘autism’ was first coined by Bleuler in 1911, in an attempt to categorise a specific type of childhood schizophrenia. From here it has progressed through several iterations, adopted next in the forties by (unbeknown to one another) physicians Leo Kanner (1943) and Hans Asperger (1944), both of whom were treating young (and mostly male) children displaying unusual behaviours and language. For the most part of its usage, ‘autism’ has pointed to a condition that has been considered inherently pathological, and only in relatively recent times has come to denote a way of being in the world that some feel they can celebrate. Any demonstrations of atypical cognitive abilities or strengths have been ‘frequently interpreted as low-level by-products of high-level deficits, not as direct manifestations of intelligence’ (Dawson et al., 2007: 657)³. For a long time, then, autism has been seen in a

³ For example, Morsanyi et al. (2009) led a study to test the hypothesis that autistic adolescents would perform more poorly at a test of heuristic reasoning than typically developing adolescents, on account of the theory that autistic people are more *context blind* (see weak central coherence theory, below). Participants undertook three famous tasks from biases and heuristics literature (the ‘conjunction fallacy’ and two versions of the ‘engineers and lawyers problem’) and indeed, it was observed that the autistic participants did, in fact, *fail* to commit the fallacies as frequently as the typically developing participants, with the conclusion that this must be because processing contextual information is more costly for those autistic participants. Surely being *less susceptible* to fallacies and cognitive biases might be a positive attribute that one might hope to aim for, reducing the boundedness of rationality? Even where autistic thinking is constructive it is immediately dismissed as a shortcoming.

wholly negative light, and considerable research effort has been put into divining its cause so that it might be both treated and eradicated.⁴

From within this deficit-focused paradigm, there have been many theories proposed as explanations of and for autism. There are too many to cover here, nor is it the purpose of this thesis to present a comprehensive overview (many excellent such overviews already exist, e.g. Chown, 2017). Of those theories that have stuck, three in particular have come to dominate the discourse, namely theory of mind deficit, weak central coherence and executive dysfunction. Each of these ‘big three’ cognitive theories will be summarised below, beginning with the theory most pervasive in the conceptualisation of autism in the public consciousness and most relevant to an investigation into autistic language use: theory of mind (dis)ability.

1.1.1 A deficit in Theory of Mind

An individual has a theory of mind if he imputes mental states to himself and others. A system of inferences of this kind is properly viewed as a theory, because such states are not directly observable, and the system can be used to make predictions about the behavior of others.

(Premack and Woodruff, 1978: 515)

Chimpanzees may have it (Premack and Woodruff, 1978), as may some corvids, rhesus macaques and dogs (Krupenye and Call, 2019) but autistic people, seemingly, do not (see below). The ability known as *mentalising*, *mind-reading*, or having a theory of mind (ToM) is widely accepted as a fundamental aspect of human social cognition, as well as a central

⁴ ‘Eradicated’ in the sense that it can be prevented from occurring by means of gene manipulation or other such technologies or interventions. However, a paper was published in 2018 revealing Hans Asperger’s close ties with the Nazi party and their eugenics programme, of which the aim was, very much, to ‘eradicate’ autism (see Czech, 2018).

feature of ostensive-inferential communication (see Chapter Z for a detailed exposition of this). Autism has been characterised principally as a condition in which this ability is absent or impaired.

In philosophy of mind and cognitive psychology, ToM abilities are also sometimes referred to as *folk psychology*: ‘the everyday, largely subliminal lore we rely on to guide our expectations’ of the mental states of others (Dennett, 1988: 495).⁵ Dennett (1988) has proposed that such wisdom is underpinned by what he terms the *intentional stance*. In attributing rationality to the conscious being whose behaviour must be predicted, one can further ‘attribute to the [being] the beliefs and desires it ought to have, given its place in the world and its purpose, and then predict that it will act to further its goals in the light of its beliefs’ (Dennett, 1988: 496).

Despite its significance for human social cognition, the mechanism behind ToM remains unclear. Yet as with Dennett’s (1988) intentional stance, the two primary explanations for ToM (a *simulationist* and a *theory theory* account) rely, crucially, on the conjuring of another mind and the attributing of intentions. For example, in the simulationist account of ToM, Jim’s ability to understand that Jack is sad when Jack tells him, with a quiver in his voice and his eyes downcast, that his pet tarantula has died, is founded on Jim’s recollection of his own experiences—perhaps from when his own pet axolotl perished a few years ago—and his ability to apply this to Jack’s present situation. Jim theorises how Jack must feel based on how he would feel in the same scenario and how he would be feeling if his own voice were to begin to quiver. In a theory-theory account of the same scenario, Jim instead draws on his world knowledge of how people typically (seem to) feel in such a situation, and when displaying such behaviour.

In a now famous study by Baron-Cohen, Leslie and Frith (1985), the ToM abilities of autistic children were tested against controls of typically developing children and those with Down’s Syndrome, using Wimmer and Perner’s (1983) puppet play paradigm. The mean

⁵ As to whether this folk psychology is learned, acquired, or innately present, arguments still abound (see Carruthers and Smith, 1996)

chronological age of the twenty autistic child participants was 11 years and 11 months and their mean mental age (verbal) 5 years and 5 months; for the 14 children with Down's Syndrome it was 10 years and 11 months and 2 years 11 months, respectively; and for the 27 typically developing children only their chronological age was measured, which had a mean of 4 years and 5 months.⁶⁷

The children are asked to watch a scene unfold featuring two doll protagonists, Sally and Anne. Sally places a marble in her basket and leaves the room. Rather mischievously (and somewhat inexplicably), Anne removes Sally's marble from her basket and stashes it in her own box. Sally returns to the room and the child is asked where Sally will look for her marble. The 'correct' answer, of course, is in her basket where she left it: successful completion of this task is contingent on the child being 'aware that different people can have different beliefs about a situation' (Baron-Cohen, Leslie and Frith, 1985: 39). Two further control questions were posed to check the child's knowledge of the actual location of the marble and their memory of its starting place. Of the typically developing children, eighty-five percent passed the false belief task, eighty-six of the children with Down's Syndrome, and just twenty percent (but, note, not zero) of the autistic children passed it. This apparent deficiency in the mindreading abilities of autists led Baron-Cohen (1990) to later coin the term 'mindblindness' (1990).

Leslie and Frith (1988) replicated this study using human rather than doll protagonists (so as to remove the need for participants to engage in pretend-play), and with an autistic cohort with a mental age exclusively over 4 years and 5 months. In this study as well, only a relatively low number—thirty-six percent—of the autistic children (with co-occurrent learning difficulties) passed the false-belief tasks (Leslie and Frith, 1988: 323). The

⁶ The marked disparity in chronological and verbal mental ages within the autistic cohort can be explained by the fact that the majority of the autistic participants in this study were (as they were termed at the time) 'mentally retarded' (Baron-Cohen, Leslie and Frith, 1985: 38). Co-occurrent learning difficulties were a factor that was both built into the diagnostic criteria of autism (but has since been removed) and an assumed core feature of it at the time. This thesis acknowledges that 'mental age' is no longer considered a valid descriptor and is only reporting the study in its own terms.

⁷ There is some discrepancy across the psychological literature in the ways that age is both calculated and described and how it is written. Throughout this thesis I have decided to simply replicate the representation used in each paper, hence the variety.

researchers noted, too, that the autistic children were the only participants *not* to ‘enter into spirit of the belief task as an opportunity to play a prank on experimenter 2’ (1988: 322). Perhaps this is my own autistic thinking, but I’m not sure that a relish in deception is a trait to particularly celebrate cultivating in young children. In fact, later research has shown that autistic children have a marked aversion to deceiving (see Happé, 1994, for a summary), so it may be an inability to suppress the ‘truth’ (of where the marble *actually* is) rather than an inability to mentalise that generated the low ‘pass’ rate on the false belief tasks.

One criticism of the interpretation of false-belief test results is that they have almost always featured pre-school-aged participants; just four percent of over six thousand published ToM studies identified through a Scopus search included school-aged children (Hughes, 2016, in Peterson and Wellman, 2018). This is possibly on account of the fact that it is at around that age that typically developing children are passing the false belief test (although infants as young as 15 months have been found to pass modified, non-verbal versions of the false belief test too, see: Onishi and Baillargeon, 2005). Crucially too, most studies have been cross-sectional, i.e. comparing age-matched (albeit rather loosely in the original Baron-Cohen, Leslie and Frith study) participant groups.

In 2018, Peterson and Wellman published the results of a longitudinal, cross-sequential study of ToM, comparing typically developing, autistic and Deaf children across the duration of a year and a half. The children involved were aged between 3 and 11 with a mean age of around 7 years and 6 months. At several points throughout the test period, participants underwent a battery of ToM tests following an extended six-step ToM scale, devised in order to mitigate the potential ceiling performance of some children.⁸ The six discrete ToM concepts measured were: (1) diverse desires—different people want different things; (2) diverse beliefs—people’s (possibly true) beliefs can differ; (3) knowledge access—seeing leads to knowing, not seeing to ignorance; (4) false belief—people can believe things that are not true; (5) hidden emotion—people can conceal their true feelings behind false expressions; and (6) sarcasm—people can mean the opposite of what they say (2018: 7).

⁸ The scale used was devised by Peterson, Wellman, and Slaughter (2012, in Peterson and Wellman, 2018) and the additional sixth measure was (6) an understanding of sarcasm

They discovered that most of the autistic children, just like the typically developing and Deaf participants, ‘do continue to make substantial longitudinal theory of mind progress during the school years’ (2018: 15). Whilst they did not reach parity with their non-autistic peers by the same age (within the test time-frame), they did demonstrate steady progress. This finding starkly contrasts with earlier studies that had supposed little to no consistent development in the ToM abilities of autistic children. Possibly most significantly, they also found, incidentally, that autistic children follow an atypical sequence of ToM stage progression. The false belief concept (4) was seen to develop *after* that of hidden emotions (5): the opposite of the established pattern of typically developing children. In other words, at the sequential stage when typically developing children are acquiring the ability to represent another’s representation of the world, and working out that the belief the other holds can be false, autistic children are instead developing the ability to understand that underlying emotions can be hidden and not match what is expressed outwardly. It is perhaps then, as the researchers themselves suggest, the over-reliance in the past on false belief test measures, and in early childhood, that has skewed our appreciation for the potential of ToM development in autism.

Dinishak and Akhtar (2013: 110) have argued that ‘mindblindness’, as a metaphor, ‘obscures the fact that both [parties] contribute to the social and communicative difficulties between them’. In characterising the autistic as mindblind, the natural reciprocity of social interaction is masked. Moreover, it may also ‘contribute to overlooking the ways in which autistic behaviours can be meaningful and/or adaptive’. This has certainly been seen to be the case when it comes to the interpretation of some of the prototypical features of autistic language use (such as echolalia: see Sterponi and de Kirby, 2016 and more detailed discussion in Chapter C). ‘Mindblindness’ also implies a black-and-white distinction between the ability and the inability to mindread, where this clearly isn’t the case. Subsequent research has demonstrated that typically-developed adults do not consistently perform at ceiling level in ToM tasks (see Samson and Apperly, 2010 for review) and that both ‘children and adults often have inconsistent and partial mastery of theory of mind concepts’ (Warnell and Redcay, 2019: 1). Additionally, ToM abilities are now understood to rely not solely on the possession of ToM *concepts*, but on a suite of processes that exploit them at speed: processes that are cognitively demanding and may fluctuate in success (Samson and Apperly, 2010).

Furthermore, some recent systematic reviews of ToM research have come to rather damning conclusions about its construct validity and the interpretation of results in relation to autistic people. For example, based on their close analyses of over 50 ToM studies, Gernsbacher and Yergeau (2019: 108) argue that ‘the claim that autistic people lack a theory of mind fails empirically; it fails in its specificity, universality, replicability, convergent validity, and predictive validity’, a criticism echoed in Quesque and Rossetti’s (2020) evaluation of classical ToM test measures. In short, it is not so simple to say that autistic people are mindblind. Chapter F revisits the ToM construct, examining its utility as an explanatory feature of communication.

1.1.2 Weak central coherence

Early after its conception, the ToM deficit theory of autism seemed highly convincing (indeed, its legacy remains dominant in autism discourse today). However, whilst it did appear to explain many of the difficulties observed in the three core areas of autistic cognitive impairments—i.e. imagination, sociality and communication—some of the ‘non-triad’ features remained unaccounted for. Troubling, too, was the fact that twenty percent of autistic participants *did* pass the false belief task in the original Baron-Cohen, Leslie and Frith experiment (1985), and thirty-six percent in the Leslie and Frith (1988) follow-up. Responding to these concerns, Frith and Happé (1994) proposed a possible, additional cognitive deficit that might explain these peripheral anomalies: the theory of weak central coherence.

They had noticed that among those features of autism not explained by an inability to mentalise (e.g. restricted and repetitive interests; a need for sameness; islets of ability; savant skills; excellent rote memory... 1994: 119) there was a root tendency towards detail-orientation. Typical information processing, they argued, features a ‘tendency to draw together diverse information to construct higher-level meaning in context’: a drive towards *central coherence* (Frith and Happé, 1994: 121). Cognition, in this framework, is a gist-finding exercise whereby a holistic overview is prioritised above costly attention to the detail of smaller parts. Information is processed in context, with the initial search directed toward global, rather than local, meaning. In autism, it was suggested that there was ‘a core deficit

in central processing resulting in failure to extract global form/meaning' (Happé and Frith, 2006). One key piece of research that had inspired this theory was Shah and Frith's (1983) 'Children's Embedded Figures Test'. In this experiment, the autistic children 'were significantly more competent' at identifying the hidden shape within a complex picture than their chronologically and mentally age-matched control peers, and also 'showed qualitatively different strategies' (1983: 619) in achieving the task.

Happé and Frith (2006) did later step back somewhat from the strong claims of weak central coherence theory, following a literature review of over a decade's worth of empirical research investigating central coherence in cognition. They revised the theory to describe a bias towards local processing in autism, as opposed to a deficit in global processing abilities, with the acknowledgment that as well as difficulties in some areas, this processing style may also bring unique strengths and talents (Happé and Frith, 2006). Indeed, a more recent study by Swettenham et al. (2014), found that the autistic tendency towards detail-oriented attention helped made them less susceptible to inattention blindness.

In a line discrimination task—where participants are presented with a series of crosses on a computer screen, each for a short time, and asked to identify which of the two lines is longer—an unexpected 'critical stimulus' (Swettenham et al., 2014: 573) appeared briefly in a peripheral location on the screen, as per standard inattention blindness testing. In one condition the 'perceptual load' (Swettenham et al., 2014: 564) was low (i.e. the lines were easy to differentiate), and in another, it was high (the lines were more similar in length). The autistic children in this study outperformed the non-autistic matched controls in both conditions, significantly so in the second, where the perceptual load was high; load intensity had no impact on the autistic children's ability to detect and identify the unexpected extra stimulus. A cognitive style that privileges detail over gist may create some problems, but it does also have its benefits.

1.1.3 Executive Dysfunction

Of the three main deficits-based, cognitive theories of autism, executive functioning theory is perhaps of least relevance to an investigation into autistic language use, but it deserves

brief mention if only on account of its enduring presence. *Executive function* is a slightly loose, umbrella term used to describe a suite of cognitive functions—unified in their demand ‘to disengage from what one is doing in order to guide one’s actions’ (Chown, 2016: 177)—such as working memory, impulse control, formation of abstract concepts, planning, set-shifting and the initiation and cessation of actions (Chown, 2016; Hill, 2004). Impairments in various executive functioning skills have been observed across a number of neurodevelopmental conditions, such as autism, AD(H)D and Tourette’s Syndrome, as well as in individuals who have experienced frontal lobe damage (Happé et al., 2006; Hill, 2004).

Experiments which utilise various tests devised to measure different executive functioning abilities, (such as the famous Tower of Hanoi / Tower of London test for planning, and The Wisconsin Card Sorting test for mental flexibility), have generated mixed results over the years (see Happé et al., 2006; Hill, 2004; Milton, 2012a). Given that executive functioning impairments cannot be said to be *specific* to autism, as a theory of autism it only has limited reach. Anecdotal evidence from autistic people themselves certainly supports the idea that switching attention (at speed) can be problematic (Milton, 2012a). However, a monotropic account of autism (and cognition more broadly: see Section 1.2.2) may explain this, and many of the other difficulties thought of as executive function impairments, equally as well.

The ‘prominence and the consensus on the potential explanatory value’ of these previously promising cognitive theories have ‘declined in the past decade’ (Lord et al., 2020: 4). In addition to them lacking specificity for autism (as opposed to for neurodevelopmental disorders in general) they are ‘largely non-developmental, applying only to a single point in time’ (*ibid.*). One criticism in particular that can be levelled at all three of the above theories is that they are fragmentary. Each can only *partially* explain *some* of the traits typically found in autism. Additionally, ‘they show little concern for the embodiment and situatedness of the autistic person...’ nor the way in which interactive factors play an explanatory role (de Jaegher, 2013: 3).

The erasure of the bodily experience of what it is to be autistic within autism theory is a thread that has often been taken up by autistic writers and self-advocates (e.g. Yergeau, 2017), and surely arises from an underlying attitude that autistic people are not quite fully human, as indicated in Baron-Cohen’s infamous comment that autistic people, with their absence of a ToM, are lacking one of the ‘quintessential abilities that makes us human’

(Baron Cohen, 2001: 174). In order to understand any living being, its corporality as its primary, interactional interface with its environment must be included in the analysis. Arguably, any theory of the mind without a footing in the body is an incomplete one. Theories of embodied subjectivity and suggestions for how these concepts might help us better understand autism and autistic communication are explored in some depth, then, in Section 2 of this chapter.

The role that interaction may play in autism, which has been largely overlooked in research rooted in the dominant deficit-based, cognitive theories, has slowly begun to receive attention in recent research situating itself in a *difference-not-deficit* paradigm. The most influential theory of which, Milton's (2012b) *double empathy problem*, reframes interactions between autistic and non-autistic individuals as unbalanced not because one party is cognitively inferior, but rather due to a marked *mismatch of salience*⁹, and as such is a centrally informing factor for this thesis (and is laid out in more detail below, in Section 1.2). One further, embodied theory of interaction applied to autistic communication, is de Jaegher's *participatory sense-making*, and this too is addressed later, in Chapter F. In the next section of this chapter, we will move on to this burgeoning area of research that approaches autism as a difference rather than a human failing, with the hope that it might lay the ground on which to build this investigation into autistic language use.

1. 2. Autism as a difference

People with autism are not disordered (the irony with the term being that so many people with autism are highly ordered in their thinking), nor should we automatically dismiss developmental differences as impairments. Certainly the neurological complexities can be baffling to the NT - as, equally, the NT

⁹ (to borrow the title of a book of Milton's collected essays)

*world is baffling to the individual with autism. This does not make either or both populations disordered - simply, different.*¹⁰

(Beardon, 2007: para.5)

Starting, perhaps, with Jim Sinclair's call-to-autistic-arms in 1993, decrying the pathologising and belittling 'deficit' model of autism, critical autism studies has bloomed with the increasing swell of autistic-activist voices claiming air-time in the academy. Drawing on critical disability studies, and situating itself within a social model of disability, a key aim is to shift 'the focus away from individuals' perceived faults onto how an impaired person is oppressed by society' (Woods et al. 2018: 977). In their recent paper seeking to (re)define critical autism studies, Woods et al. (2018) propose the use of the following as its working definition:

The 'criticality' comes from investigating power dynamics that operate in Discourses around autism, questioning deficit-based definitions of autism, and being willing to consider the ways in which biology and culture intersect to produce 'disability' (Waltz, 2014: 1337).

While critical autism studies is an emancipatory form of (primarily) autistic-led scholarship, the neurodiversity perspective is a broader, socio-political attitude towards how autism is defined and how autistic people may define themselves (for an excellent overview, see Silberman, 2015). The term 'neurodiversity' was originally coined by Singer (1999) in reference to what she saw to be a biologically-based neurological human diversity (Singer, 1999, 2017; Walker, 2012), with 'minority models of neurocognitive functioning [seen as] disabled by a hegemonic "neuro-typical" (i.e., "normal") society' (Chapman, 2019b: 371).

¹⁰ *NT* is standard shorthand for *neurotypical*: a term derived from the neurodiversity movement, denoting individuals whose *neurotype*—neuro-cognitive organisation— is typical. *Neurodivergent* individuals possess neurotypes that differ from the norm. Examples include autism spectrum conditions, AD(H)D, dyslexia, dyspraxia, dyscalculia, Tourette Syndrome...

Closely aligned with the disability rights movement the neurodiversity movement developed in response to an increasingly vocal, ‘autism-parent’ lobby demanding a cure for their child’s autism (Robertson and Ne’eman, 2008). Neurodiversity proponents advocate for autism, as well as similarly neurodivergent conditions, to be ‘seen not as pathologies needing a cure, but as natural differences which should be accepted and accommodated’ (Graby, 2015: 233). Key tenets of the movement include a push for ‘strengths-based approaches to intervention and support’ (den Houting, 2018) and both treatment goals and research funding to be guided by priorities set by autistic people themselves. Whilst the neurodiversity perspective (in contrast to a medical model of disability) does not view autism as pathological, it is in full recognition of the many ways in which autistic people can be disabled (Bertilsdotter, Chown and Stenning, 2020).

What both critical autism studies and the neurodiversity movement have in common, then, is a stance that actively foregrounds the framing of autism as a *difference* rather than a *deficit*. The aims and methodology of this thesis, I believe, can be comfortably located within critical autism studies, according to the definition above. In the following section, theories of autism that have arisen from this relatively recent perspective, and research undertaken within those parameters will be explored and the autism theoretical backbone of this research revealed. However, before we can proceed any further, the notion of ‘difference’ requires some delicate unpacking.

1.2.1 A brief note on ‘difference’ and norms

Embedded into the meaning of ‘difference’ is the implication of some ‘other’ from which there is deviation. ‘Difference’ marks a turn from where one has begun, if only conceptually. As such—and in particular, when discussing people—it could be seen to mark that or those who do not fit or meet standard norms. From here, the journey to attributing a privileged status, or superiority, to those who are *not* ‘different’ is a short one and one about which to be mindful. However, acknowledging that we are not all the same is an essential step towards social inclusivity and, arguably, genuine empathy.

When talking about difference in the context of broader disability, Erickson (2014: 11) explains how ‘marginalized others come to be so often understood and constructed as [...] “less than” [...] (if we are understood as persons at all)’. Taking care to sufficiently explain and contextualise a *difference-not-deficit* view of autism as a critical, emancipatory response to the traditional ‘deficit’ view is essential. If we do not, we run the risk of inadvertently implying a portrayal of autistic individuals as *less than* those people consensually considered ‘norm-*al*’. The extent to which society is haunted by the spectre of disability as a ghoulish malformation of humanness, and predisposed to view it as such, should not be underestimated. Here, Erickson again:

So called “truths” about disabled people are informed by a long history of medical, charity and eugenic models of disability which take up disability, and particular bodies and/or minds, as being in a state of biomedical malfunction. This understanding constructs our needs, lives and desires as outside normativity and therefore unintelligible (Erickson 2014:13).

The needs of those with divergent ways of being are often not acknowledged by those in power. Sometimes they are wilfully ignored. Today, people with disabilities of all kinds (in fact, people with *differences* of all kinds) are frequently excluded from community spaces on account of the many physical, social, cultural and financial barriers to access (Erickson 2016: 14). The lack of consideration for accessibility requirements or adjustments is indicative of the normativised construction of what constitutes a ‘person’ within society. More often than not it is an absence of forethought, or of the social imagination required to know that not everyone functions or lives in the same way, rather than active, intended discrimination that precludes people with disabilities from participating. In order for disability-related needs to be accommodated, we must first acknowledge the difference that leads to them.

Within critical autism studies and the neurodiversity movement, difference is understood as an expression of genetic diversity: something of ultimately great *potential* personal and societal value if allowed to flourish. The central premise of these perspectives is that on account of their often unique and atypical perspectives and skill sets, if ‘accepted and

enabled, autistic people are able to not only play an equal role in society but often an extraordinary and necessary one' (Adams, 2018). This emphasis on the value of cultivating difference mirrors intersectional feminist Audre Lorde's address to the Second Sex Conference in New York in 1979, when she encourages not simply toleration, but an active celebration of the strength and 'creative function of difference in our lives' (Lorde, 1984: 111).

This attitude towards difference is far closer to the one adopted in this thesis. Also important is an awareness of the many different ways in which critical autism studies intersects with sibling social activist movements outside of critical disability studies, such as feminism and queer theory. *Neuro-queer* is a chosen term sometimes adopted in the autistic community (see Yergeau, 2017), positioning an autistic selfhood outside of constraining, binary (right or wrong) norms and, indeed, autism frequently coincides with gender non-conformity (see Davidson and Tamas, 2016; Kourti and MacLeod, 2018). Central to each of critical disability studies, critical autism studies, intersectional feminism and queer theory is a sympathetic 'norm-shattering movement' (Yergeau 2017: para. 3 of Coda, chapter 1) and a desire to upend the dominant and oppressive status quo.

Norms—and how they can hinder successful communication as well as facilitate it—are central to the work of this thesis, as will hopefully become increasingly apparent. Norms are unquestioned expectations of what is to come, and are probably as equally rooted in our societal environs as they are in our inherent human mode of processing information. They function as heuristics, reducing the cognitive load in a densely populated social world. However, when they remain unexamined they are often mistaken for truths and it is here that they have the potential for harm. Norms only ever refer to a thin, central (and possibly illusory) slice of the bell curve. The function of norms within the workings of human cognition will be revisited in more depth in Section 2 of this chapter; their role in utterance interpretation, in Chapter Z; and their place in intercultural communication in Chapter F. Suffice it to say for now, that norms (marked or otherwise) will be treated with a healthy suspicion throughout this thesis, and any talk of autism as a 'difference' does not in any way imply an endorsement of a superior *normalcy*.

1.2.2. Monotropism

A problem that soon becomes apparent, when scanning the range of deficit-models of autism (including those above) is that none can explain the full catalogue of ‘symptoms’ or differences that are often exhibited by autistic people. *Monotropism* (Murray, Lesser and Lawson, 2005 and Murray, 2018, 2020) is a theory that aims to do just that. Originally proposed by three autistic scholars,¹¹ this theory deviates most significantly from the traditional ‘big three’ psychological theories of autism, in that instead of seeking to find explanations for observed behaviours, it draws on subjective, introspective autistic experience.

A monotropic account of autism begins from the position that the mind is, essentially, an interest system—a starting place not dissimilar to that of the weak central coherence theory—and that ‘atypical strategies for the allocation of attention’ (Murray, Lesser and Lawson, 2005: 139) are the central cause of the various autistic social and behavioural manifestations. Murray, Lesser and Lawson (2005: 140) propose that the degree or breadth of attention allocation in humans is ‘normally distributed’ and, (largely) ‘genetically determined’: with some people possessing a greater tendency towards multiply focused attention (*polytropism*), and others a tendency towards more narrowly focused attention (monotropism). Those classified or diagnosed as autistic will find themselves at the far end of this distribution with a highly narrow ‘attention tunnel’. Where non-autistic minds will comfortably entertain many simultaneous interests, each moderately aroused, the autistic mind will maintain only very few simultaneous interests, with each one highly aroused and intensely focused upon.

The monotropic account, the authors argue, offers a unified explanation for the many different features associated with autism. The restricted and repetitive behaviours and interests (see DSM-5 criteria, APA, 2013) can be explained by attention firing into ‘monotropic superdrive’ (Murray, Lesser and Lawson, 2005:143) and entraining itself onto

¹¹ One of whom, Dinah Murray, is a psycholinguist who was supervised during the writing of her PhD thesis by, coincidentally, one of the creators of relevance theory, Deirdre Wilson: See Chapter Z for more on relevance theory and the ways in which a monotropic account of autism may accord with it.

one self-pleasing task or topic.¹² Social and communicative difficulties may come about as a consequence of a difficulty in processing, at speed, information from a variety of simultaneous channels (audio, visual, culturo-social encyclopaedic knowledge, etc...): a skill better suited to polytropic individuals with less narrowly and intensely focused attention. Atypical patterns of sensory experience, such as the hyper- and hypo-sensitivities to various sensory channels (see Section 2 of this chapter for more detail) might arise from some sensory inputs falling *within* the attention tunnel, and being processed, therefore, with heightened significance, and others falling outside, becoming virtually unnoticeable.¹³ In addition, monotropism can also explain what the predominant cognitive theories cannot, namely:

...how individuals on the autism spectrum show a tendency toward either being passionately interested in a task or phenomena, or not interested at all, or how an unanticipated change ‘within the attentional tunnel’ can lead to a catastrophic disconnection from a previously ‘safe’ state of mind (Milton, 2012a: 7).

As a possible theory of autism, the monotropic account is compelling. It also might explain the discrepancies and great variability in results seen across autism research: the focus of each autistic person’s narrow tunnel of attention will vary considerably, creating highly idiosyncratic individuals. Despite this, monotropism has received little mainstream attention since its conception nearly fifteen years ago. The fact that its authors are autistic may have undermined its credibility (the value of autistic inclusion in autism research is still yet to be enthusiastically embraced by the academy, despite the growing movement towards participatory research methodology: see Nicolaïdis et al., 2011; Fletcher et al., 2018).

¹² ‘Stimming’—the stereotyped, self-stimulatory behaviour often seen in autism, such as finger-twiddling, hand-flapping, rocking, etc.—can also be explained by a monotropic account: These repetitive actions may provide reliable sources of attention-rich sensory inputs that can be used to ‘drown out’ other unwanted, clamorous sensory ‘noise’, and as such perform a soothing or focusing role.

¹³ A monotropic account of autism clearly has interesting implications for how language is processed in autistic (or ‘highly monotropic’) minds, particularly in terms of how the various lexical, semantic, phonological and pragmatic strands are attended to and integrated at high speed in online interaction.

However, within critical autism studies—a field mostly populated by autistic academics—it has found a cult following, and its inherent difference-not-deficit perspective partners well with another autistic theory of autism: the double empathy problem.

1.2.3 The Double Empathy Problem

Communication does not occur in a void, nor solely in the mind of one individual: it is a social, interactive and intersubjective phenomenon. Whereas traditional ToM-deficit explanations of autism have situated the mind-reading failures in the mind-brains of autistic individuals, autistic scholar Milton (2012b) has proposed the term ‘the double empathy problem’ (DEP) to reflect the inherently two-sided nature of communication breakdown. Based on his own insights and subjective, anecdotal evidence from the autistic community, lack of understanding in ‘cross-neurological’ (Beardon, 2017—i.e. between autistic and non-autistic speakers) communication is framed as ‘a disjuncture in reciprocity between two differently disposed social actors’ (Milton, 2012b: 884). According to this approach, social subtext is seen not as a determinate set of a priori features, but something that is actively constructed by those involved. The cognitive context surrounding the communication is co-created. Misunderstanding, here, is not just a consequence of autistic ‘impairment’ but a mutual failure in reaching consensus through bilateral empathy.

Recent empirical autism research, situated largely in the social sciences, has begun to provide evidence in support of the DEP. Some have done so by illuminating the difficulties that non-autistic people also experience in understanding autistic people, such as difficulty in inferring autistic affective and mental states (Brewer et al., 2016; Edey et al., 2016; Heasman and Gillespie, 2017; Hubbard et al., 2017; Sheppard et al., 2015; Usher et al., 2018) and a tendency towards negative thin-slice first impressions about autistic people (Cage and Burton, 2019; Cola et al., 2020; Morrison et al., 2019a; Sasson et al., 2017). Others have highlighted how autistic people can in fact demonstrate highly successful and nuanced socio-communicative abilities when among others of a similar neurotype (Crompton, Fletcher-Watson and Ropar, 2019a, 2019b; Heasman and Gillespie, 2019; Morrison et al., 2019b). The findings of these studies above attest to what has long been expressed by autistic critical autism studies scholars (e.g. Arnold, 2012; Chapman, 2019a; Graby, 2015; Milton, 2012b,

2014b, 2017a; Murray, Lesser and Lawson, 2005; Sinclair, 1993, 2010; Walker, 2012; Waltz, 2014; Woods et al. 2018; Yergeau, 2013).

For example, Brewer and colleagues (2016) investigated the ability of non-autistic participants to identify emotion as conveyed via the facial expressions of autistic participants. Three posing conditions were set, with the participants (sixteen autistic and matched non-autistic controls) asked to pose six basic emotions (happiness, sadness, fear, surprise, anger, disgust): a) naturally, to the best of their ability; b) with the intent to communicate the emotion; and c) with the benefit of a mirrored reflection of the posed expression. The third, mirrored condition was important for trying to offset any potential effects resulting from alexithymia. Alexithymia is a condition in which individuals struggle to identify emotions in the self, or distinguish interoceptive bodily signals (such as hunger, thirst, pressure, etc) and is present in up to fifty percent of autistic people (see Bird et al., 2010; Brewer, Cook and Bird, 2016; Garfinkel et al. 2016). In the emotion recognition phase, participants (14 autistic and 13 non-autistic controls) were asked to select which emotion matched the randomly presented series of facial expression images from the three posing conditions and to rate, on a scale of 1-9, how confident they felt in their judgement.

What Brewer and colleagues found, was that the autistic facial expressions were more poorly identified than those posed by the non-autistic participants (and that, interestingly, this remained the same for both autistic and non-autistic recogniser groups). Facial expressions from both groups were better recognised when posed under the second (communicative) and third (mirrored) conditions. Admittedly, the emphasis of their enquiry was placed upon whether autistic people can *produce* ‘recognisable emotional expressions’ (Brewer et al., 2016: 262)—concluding, of course, that they can’t—and as such was still framed by a deficit view of autism. However, flipped, these findings demonstrate the difficulty non-autistic people may have interpreting the facial expressions of autistic people. The cognitive empathy of the non-autistic participants was not able to extend, in this case, beyond that which was familiar (typical).¹⁴

¹⁴ One obvious limitation of this study, beyond its size, is the lack of ecological validity: the facial expressions under assessment were not naturally arising, contextualised, non-verbal communication but caricature-like fixed ideas of facial expressions.

In a similar kind of study, Sheppard and colleagues (2015) sought to test whether non-autistic people were able to interpret the behaviour of autistic people. Twenty young autistic males and twenty young non-autistic males (mean age of 15.4 years) were surreptitiously recorded reacting to one of four scenarios. Having been told they were coming to pose facial expressions for a subsequent study, when they first entered the room—where the camera was set up and already secretly filming—the researcher performed one of four scenarios: a) telling a joke; b) telling a story; c) making the participant wait; d) giving three compliments. In the first study, 30 non-autistic raters (15 male, 15 female, with a mean age of 23.2 years), who had not been informed that some of the participants they would watch were autistic, watched short clips of the participant reactions before having to select which scenario they believed them to be responding to. In the second study, twenty different non-autistic raters (10 female, 10 male, mean age of 20.3 years) watched the same reaction clips without being informed of the scenario conditions they were responding to, and rated each according to expressiveness on a seven-point scale.

In the first study, for the story, waiting, and compliment conditions, ‘participants’ judgments effectively (and unwittingly) discriminated between those who did and did not have ASD’ (Shepherd et al. 2015: 1250), in that they found autistic reactions harder than non-autistic reactions to match with the correct conditions. In the second study, no differences were observed in terms of expressiveness between the autistic and non-autistic groups apart from in the compliment condition, leading the researchers to conclude that despite autistic participants ‘being expressive in most cases, it seems that the form of their expressions were not easily interpretable to participants and perhaps were atypical’ (Shepherd et al., 2015: 1251). In their discussion of the results, the researchers puzzle over why the autistic group should be less expressive in response to being paid a compliment.

Camouflaging or *masking* is a strategy often adopted by autistic people in social situations, whereby their natural responses and behaviours are suppressed and reactions that are considered more socially acceptable or less socially risky are performed (see Holliday Willey, 1999; Hull et al. 2017; Lai et al. 2017). It strikes me that a group of adolescent males,

the like of whom typically find themselves at the periphery of society and at significantly increased risk of being bullied (Zablotsky et al., 2014), might be unaccustomed to receiving compliments and be unsure of how they ‘should’ respond. This uncertainty may have reduced commitment to an overly expressive response, in case the response was ‘wrong’. Just because in the second study their responses were rated equally as expressive as the non-autistic responses does not, necessarily, imply that the responses were equally as authentic, and perhaps this potential disjuncture between natural and performed responses is what perplexed the raters in the first, matching-responses-to-scenario study. As the authors themselves acknowledge, reflective accounts from the autistic participants involved in the first, videoed stage of the study, describing how they felt, could have provided a more nuanced insight.

One further, recent piece of research that highlights the significance of the role played by the non-autistic party in cross-neurological interactions is that undertaken by Sasson et al. (2017). Seeking to identify the extent to which the perceptions, behaviours and social decisions of non-autistic interlocutors affect the social impairments observed in autism, they set up the following study. Forty stimulus participants (twenty autistic, twenty matched non-autistic) were filmed engaging in a ‘high risk social challenge task’ (Sasson et al., 2017: 2)—a mock audition for a reality show. The first ten seconds of footage from each participant were then edited to generate five different ‘presentation modalities’ (*ibid*): (1) audio-only; (2) visual-only; (3) audio-visual; (4) a static image—not mid-speech or gesture; and (5) transcript of speech content. Two-hundred and fourteen undergraduates (mean age of 21.4 years) were recruited as raters and were charged with rating the stimuli (one presentation modality per stimulus participant) on a scale of 0-3, according to ten criteria. The first six—a) attractiveness; b) awkwardness; c) intelligence; d) likeability, e) trustworthiness, and f) dominance/ submissiveness—are associated with forming first impressions and the final four criteria—willingness to live near the stimulus participant, likelihood of hanging out with them in their free time, level of comfort sitting next to them, and likelihood of starting a conversation with them—were included to reflect behavioural intentions.

For all of the presentation modalities except for (5) (the transcript modality), the autistic participants were rated significantly more negatively. The difference in ratings of favourability between the autistic and non-autistic stimulus participants was greater for (3)

(audio-visual) compared to (1) (audio only, which had already elicited a markedly low rating in contrast to that given to the non-autistic participants). Conversely, for the non-autistic group, when visuals were added to the audio the ratings became more favourable. Most significant, then, was the discovery that the ‘biases disappear when impressions are based on conversational content lacking audio-visual cues, suggesting that style, not substance, drives negative impressions of [autism]’ (Sasson et al., 2017: 1). It is not *what* is said that triggers an unfavourable response in non-autistic interlocutors, nor even necessarily *how* it is said (although atypical prosody clearly also plays an important role: see Chapter C). Negative thin-slice judgements are formed instantly on the basis of seemingly imperceptible visual cues that suggest that the autistic person is somehow ‘other’. This is important knowledge. If speakers are entering into conversations with autistic people—consciously or unconsciously—with their hackles raised, how much of a ‘helpful speaker’ (Van Der Henst, Carles, and Sperber, 2002: more in Chapter Z), are they really likely to be?

Finally, a piece of research by Heasman and Gillespie (2017) made some interesting findings regarding autistic adult perspective-taking that support the DEP. With the aim of identifying and understanding the potential effects of cultural representations of Asperger’s syndrome on the social relationships of adults with an Asperger’s diagnosis (henceforth *autistic adults*), they devised a two-sided methodology for mapping out misunderstanding based on Laing et al.’s (1966) Interpersonal Perception Method (IPM). The IPM, originally devised to probe interpersonal disagreements, was selected due to its facility in separating actual misunderstandings from perceived ones.

In this study, 22 dyads—comprising one autistic adult (mean age of 21.09 years) and a chosen (non-autistic) family member—were recruited to take part. Participants were provided with a set of 12 topics known to be typically challenging to autistic people (such as ‘small talk’, ‘everyday tasks’, ‘making decisions’, etc...) and asked to perform three ratings for each topic using a 6-point Likert scale spread across an A3 ratings mat: (1) self-rating (how good am I at doing X?); (2) other-rating (how good is s/he at doing X?); and (3) meta-rating (how will s/he rate me at doing X?). Following rating, participants were recorded reflecting on their decisions. The results were not ultimately provided to the participants in this case (diverging from traditional IPM procedures) so as to avoid potential distress from discovered misunderstandings.

Heasman and Gillespie found that overall, ‘misunderstandings occur on both sides of the relationship’ (2017: 5). Perceived misunderstanding (i.e. misunderstanding between what I think of X and what I think my sister thinks of X) was more prevalent than actual misunderstanding (i.e. misunderstanding between what I think of X and what my sister thinks I think about X). This is important when we look more closely at where the misperceptions are taking place. In (1) self-rating, autistic participants rated themselves, on average, more poorly across all tasks than did the non-autistic family members. However, in (2) other-rating, the family members rated the autistic participants as markedly more poorly still (i.e. potentially underestimating the abilities of the autistic adults). Most significant was the fact that the autistic participants accurately predicted—in (3) meta-rating—the poor, lower rating of them given by their family member *despite not agreeing with it*.

What this demonstrates is a highly sophisticated level of meta-perspective-taking that challenges the ToM-deficit explanation of autism and supports a double empathy problem argument. (It could be argued, too, that the lower ratings of *self* (1) than *other* (2) in topic areas that were selected for being generally harder for autistic people, demonstrates a good level of self-awareness and first order ToM too). Ironically, and sadly, when the reasons for the given ratings were analysed, they revealed that family members tended to be focused on the perceived ‘extreme impairment in social understanding’ (2017: 8) of their autistic family member; beliefs that ultimately interfere with their ability (or willingness) to ‘consider more nuanced aspects of the [autistic person’s] behaviour’ (*ibid*). In addition, it was the autistic participants who showed the greatest tendency to consider self as the cause of misunderstanding (62% vs 40% of non-autistic family members).

Together these studies begin to form a body of evidence to support the idea, felt in the bones of many of the autistic people able to vocalise their experiences, that lack of understanding between autistic and non-autistic people runs both ways. Beyond this lack of understanding, there is also a lack of social imagination, or second-order ToM when it comes to non-autistic people conceiving of the subjectivity and the mental states of an autistic person. As put by Milton (2012b: 886), for autistic people there is a ‘pertinent personal requirement’ to understand, or make the extra efforts to try to understand the other minds of non-autistic people in order to ‘survive and potentially thrive in a non-[autistic] culture’ (*ibid*), whereas for non-autistic people there is no such imperative. Section 2 of this chapter will go on to

explore some of the issues surrounding the ways in which we can and cannot understand other minds and how that relates particularly to autism, and a study of cross-neurological, autistic-to-non-autistic communication.

2. Towards an ontology of autistic subjectivities¹⁵

How researchers conceive of autism reflects as much our position on the nature of brains, minds and their relationship to the societies around them, as it does our knowledge of the ‘condition’ itself. In any attempts to make sense of it, even the seemingly innocuous step of accepting autism as a phenomenon rooted primarily in cognition is meaningless until we have first clarified exactly what we believe human cognition to be and how we believe it mediates an individual’s subjectivity of (any) external reality (we might believe there to be).

This section will endeavour to outline a workable ontological theory of autism, compatible with a difference-not-deficit view. Drawing on contemporary theories of the *predictive mind*, and *embodied* and *enactive cognition*, this chapter works its way toward a suggestion of how autistic subjectivities may be understood; a necessary starting point for any serious investigation into autistic communication and language use.

What is an autistic body? As an autistic person, I am well aware of the ways in which my "neurological disorder" manifests itself in and through my muscles and sinew, the ways in which autism rolls off my tongue, transforms my gait into autly bounce, stiffens the contours of my face as my eyes survey a room. Autism is embodied; my embodiment is autism.

(Yergeau 2013: np)

¹⁵ Section 2 of this chapter represents an edited section of ‘Perceptual deviants: Autistic subjectivities in a (not so) predictable world’ (Williams, 2020b) included in ‘The Neurodiversity Reader’ (Milton et al., 2020).

As far back as Kanner's early descriptions (Happé, 2018), autistic people have been recognised as possessing unusual sensory and motor responses. Yet sensory sensitivities, or 'atypical sensory reactivity' (Hannant, Tavassoli and Cassidy, 2016: 2), have only recently found their way into the latest, fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, American Psychiatric Association, 2013). Although still (in the most part) couched in a deficit perspective, research is finally beginning to take seriously the sensorimotor and perceptual differences and difficulties associated with autism, and the ways in which they *may* cascade towards those social difficulties that have thus far received attention (e.g. Belek, 2019; Beardon 2017; Bogdashina, 2010; de Jaegher, 2013; Donnellan, Hill, and Leary, 2013; Fournier et al., 2010; Garfinkel et al. 2016; Gepner et al. 1995; Gepner and Mestre, 2002; Hannant, Tavassoli and Cassidy, 2016; Jackson-Perry et al., 2020; Kientz and Dunn, 1997; Marsh et al., 2013; Smith and Sharp, 2013; Tomchek and Dunn, 2007).

Complex individual patterns of hyper- or hypo-sensitivity to various exteroceptive (sound, vision, smell, taste, touch, depth perception...) or interoceptive and proprioceptive stimuli (pressure, balance, temperature, thirst, hunger, emotion, pain, etc...), difficulties coordinating movement and perception, and muscle tone and postural differences (de Jaegher, 2013) all contribute towards a bodily way of being in the world that sets autists aside from the typical way of human experiencing. This, in itself, is not particularly special: there is clearly already a wide array and variety of possible sensorial experiences of the world available to humans, most obvious in those who are Deaf or Blind. It is when we step back and look at what that means for how the world is experienced and *enacted*, that it starts to become of interest and use to an investigation into autistic communication.

Embodied and enactive theories of cognition (see Clark 1997, 2013; Drayson and Clark, 2020; Klin et al. 2003; Seth, 2013; Varela, Thompson and Rosch, 1991) argue that mental processes cannot, in fact, be easily teased apart from the constraints of the body. Brains are seen more as 'controllers for embodied activity' (Clark, 1997: xii) rather than as flesh-machines computing data acquired via sensory and perceptual receptors. Living and cognizing is seen as an integrated, autopoietic (self-maintaining) activity (de Jaegher 2013; Thompson, 2004, Seth and Tsakiris, 2018) where action, perception and cognition interweave to keep an organism alive. What both embodied and enactive theories of cognition share is a phenomenological framing of an individual's external reality as

inextricably linked to their experience of it, as filtered through their body. Emphasis is placed on the online relationship between brain, nervous system and external environment, where the environment is understood to be, at least in part, enacted (created) by the intelligent inter-relation of sensorimotor faculties and whatever it is that is actually ‘out there’.

Closely related to enacted cognition is the concept of *Umwelt*, a term coined by late twentieth century German biologist Jacob von Uexküll, as a means of describing the environment as perceived by any living organism. *Umwelten* (the plural) are those distinct phenomenal worlds in which organisms are perceiving, acting subjects: ‘worlds strange to us but known to other creatures, manifold and varied as the animals themselves’ (Von Uexküll, 1992: 319).

Picture, if you can, the *Umwelt* of the honeybee. Her position in space is determined by the relation between herself, the hive entrance and the position of the sun as it moves through the sky in a constantly recalibrating equation. Star and cross shapes leap out of the landscape while compact round shapes fade into the background (Von Uexküll, 1992: 351), thus directing her flight across the meadow to opened flowers rather than to shut buds. Ultraviolet landing strip patterns on petals, invisible to humans, direct her to nectar-filled cups at the heart of the flower. Of the multitude of phenomena in the natural world, it is only those that are ‘biologically meaningful’ (Von Uexküll, 1992: 327) to an organism that will ‘shine forth from the dark like beacons’ as sign stimuli, affecting recognition by its receptor organs (Von Uexküll, 1992: 325). The world, as experienced, is carved up into meaningful chunks based on how a person (or organism) interacts with, and is attuned to, it.

With sensory and perceptual receptors attuned atypically, autistic people inhabit *Umwelten* that can set them significantly apart from their peers. Recognising that autistic people perceive and process information—and therefore experience the world—differently, is crucial. However, doesn’t everyone have their own unique experience and perspective? Qualia, the introspectively qualitative properties of experience, are largely seen as scaffolding and elaborating our subjectivity; what it is to be conscious of being a ‘me’. Jill and Jane may gaze at the same sunset and agree on the gloriousness of its peachy-red hues, but there is no way of knowing whether Jill’s ‘peachy-red’ is the same Jane’s, or if it is actually closer to Jane’s ‘pale pink’, her ‘orange’, or even her ‘electric blue’. The phenomenal character of experience is wholly subjective, although language allows us to

yoke our subjective experience to a common coin sufficiently enough so as to forget this most of the time.

One of the notions that is often appealed to in order to explain the way in which this chasm is traversed is ToM. Putting aside, for now, questions around how and whether ToM does or doesn't work, how *could* an autistic person be expected to correctly infer the mental state of some non-autistic other, when there is such a marked phenomenological gap between subjective experiences? (Or, indeed, and perhaps more importantly, how could a non-autistic person correctly infer an autistic mental state?) This question can be seen as at the core of the DEP and nods back to the discussion of norms in Section 1.2. In truth, none of us can ever fully understand or accurately hold in mind the subjective experience of any other. However, we can often approximate it to satisfactory degree; and the more we have *in common*, the easier it is to do so.

American philosopher Thomas Nagel (1974) grappled with a similar issue in his now famous paper 'What is it like to be a bat?'. Attempting to explain consciousness, his argument went as follows. Any conscious being must have some subjective *sense* of what it is like to be itself. A bat uses sonar, a sense that humans do not possess, as its principal means of interpreting and navigating the world. If we were to try to *imagine* the subjective experience of a bat, we would only achieve a poor analogue as we are lacking in the necessary faculties to accurately represent a bat's *way of being* in the world. We can only get so far in imagining a world sparkling in echolocative salience when we have never *known* what it is to experience echolocation. We do not have access to the *Umwelt* of a bat and so cannot begin to imagine it: imagination is anchored in experience and experience is hewn by the axe of the body. Autistic people clearly experience the world in ways that diverge beyond the central range agreed upon as the 'norm' within any given culture or society. We are not *less than* human or humans with *faulty* 'wiring', rather we are *differently* human, experiencing reality in a (neuro)divergent way.

The combined somatic experience of possessing and regulating a distinct body within the world is one of 'the most basic aspects of conscious selfhood upon which higher-level properties of selfhood, such as the experience of being a distinctive individual across time, may rest' (Seth and Tsakiris, 2018). Moving us away, in the field of consciousness studies, from the old notion of material bodies as *beast-machines*—except for when, in the case of

human-animals, consciousness and reason illuminate and elevate us beyond (see Descartes, 1998)—is *predictive processing* or *predictive coding* (see Clark, 1997, 2013; Friston, 2010; Friston and Kiebel, 2009; Gregory, 1980; Helmholtz, 1860; Hohwy, 2012; Pezzulo, 2017; Seth and Tsakiris, 2018; Wiese and Metzinger, 2017). This computational, top-down / inside-out theory of perception places the brain at the center of perception. As a means of most efficiently managing the impossibly vast and constant stream of continuously updating environmental and interoceptive data, the brain reduces its load by generating informed predictions about its surrounds. Only the anomalous perceptual data that serve as prediction errors are fed back up to either tweak the signal or trigger an action response to right the mismatch. Reality and perception, here, are tightly controlled hallucinations, built of Bayesian-style inference.¹⁶

According to a *neuroconstructivist* perspective (see Karmiloff-Smith, 2006; 2009; Westermann et al., 2007), an embodied-cognition-compatible alternative to a nativist position of innate modularity, (human) cognition and intelligence are best thought of as emergent phenomena. Genes, the brain, cognition and environment are all seen to interact multidirectionally throughout an individual's ontogenetic development. Neural connectivity, as well as gene expression, is shaped and changed across an individual's lifespan in response to the bodily and external environments the individual finds herself in. Addressing the age-old 'nature vs. nurture' question often debated in cognitive science, Karmiloff-Smith turns it on its head:

[A] question that is rarely addressed in the developmental neuroscience literature is whether the environment is the same for individuals developing typically and those developing atypically. In other words, does having a developmental disorder not only involve genetic mutations but also subtly change the environment in which the atypical infant/child develops? ... [There is] a strong case for hypothesizing that the environment does indeed change with respect to atypically developing infants, probably continuing to do so throughout development (Karmiloff-Smith 2009: 60).

¹⁶ See Chapter F for discussion of a predictive coding account of autism.

In one example of how the environment of a child with a developmental disorder may subtly differ from that of a child without one, Karmiloff-Smith recounts the way in which parents of atypically developing children often clamp down on overgeneralisation in the early stages of language acquisition (i.e. ‘cat’ for ‘dog’), where parents of typically developing children tend to pay it little heed. The implicit fear is that if not corrected, the child will never learn the correct term, yet in creating such a strictly controlled atmosphere they are possibly limiting the child’s potentiality to develop category formation (something that is often later impaired- *ibid*). This example brings to mind Sterponi and de Kirby’s (2016) claim that atypical verbal behaviour in autistic children is often discounted—and therefore not engaged with—as simply symptomatic of their condition, thus overlooking its potential communicative capacities (see Chapter C for further discussion). What Karmiloff-Smith’s example does is demonstrate how we, as human organisms, progress through a never-ending circuit of iterative feedback loops that shape our biological and cognitive trajectories.

Is it any wonder, then, that the world, as enacted by an autistic individual, is characterised by divergent patterns of salience? Reality, as experienced through an autistic body, with its divergent sensory, perceptual and interactive mechanisms is coloured differently (it also tastes, feels, smells and sounds differently...). For all and any of us, there is a gap yawning between the subjective reality of our own, unique beast-machine, in the world as we have attuned to it, and that of our most proximal (and even our most beloved) neighbour. For many autistic people, the gap between their *Umwelt* and the next is wider yet, and more of an ache than a yawn. Add to this the social practices of interacting that confound this difference and trajectories are set that widen the gap further. Recognising this significant phenomenological and subjective gap is, I believe, essential both for coming closer to understanding what autism actually *is*, and for making sense of the ways in which communication across that gap does and does not succeed.

Chapter Z: Human Understanding

To the northerly tip of the island, beyond the graveyard of dilapidated boats, lay a small plot of unused land. Deciding to take advantage of the grinding-to-a-halt that had occurred with a sudden national ‘lockdown’ response to the global Covid-19 crisis, the owners of the boatyard where my houseboat was moored launched an enthusiastic clearing of the overgrowth. As the digger compressed discarded bilge pumps and jerry cans into the ground, crushing rusty paint tins and broken masts, out through thick ribbons of bramble and knots of bindweed, emerged my beehive. Within a day, a swarm had discovered it. The hive I’d left to become weed-shrouded and webbed two summers ago, following a devastating wasp invasion that had killed my colony of ten years, was now humming, and alive.

A week later, in the high heat of late May, I returned to find thousands of bees smothering the face of the recently repainted hive. Around the dark entrance slit I had coloured two red lips: lips that now murmured as the mouth of a bearded lady.

I had, of course, heard of ‘bearding’ bees before but never, in fifteen years, had I experienced it myself. As days and nights passed with the temperature dropping and the throng remaining on the outside, I became increasingly concerned. I thumbed through the antique beekeeping books growing slowly damp on my boat bookshelves. I Googled. Nothing made sense. I sat one evening at dusk before the hive, half-balanced awkwardly on a lump of concrete, and asked the bees, aloud:

“Are you okay? What do you need from me?”

The answer was not forthcoming.

But why should it be? These bees were not familiar to me, nor I to them. I had not yet learnt the colony's character or their ways, and I was 18 months out of the daily practice of being around bees.

As I watched them slide one over another like dark treacle, humming gently and fanning their wings, I felt decidedly out of sync...

While Chapter X sought to tease out a working definition of construct of autism, this chapter aims to make sense of making sense: or in other words, to understand human understanding. In order to investigate the breakdowns in mutual understanding that can often occur between autistic and non-autistic interlocutors, it is essential, first, to outline how it is that the extraordinary feat of mutual understanding may be achieved at all. In Section 1 of this chapter, the evolutionary foundations of understanding (information processing) and communication are introduced. Section 2 delves into the study of meaning in context (pragmatics) and Section 3 provides an overview of relevance theory (Sperber and Wilson, 1986/1995): a detailed cognitive account of utterance interpretation especially germane to the larger interests of this thesis. Finally, Section 4 draws parallels across disciplines from the concept of relevance to that of salience and explores how these, in turn, may relate to notions of attention, synchrony and flow in the context of communication. But before all that, let us return to the bees...

1. Understanding as navigating

The sensorium of *apis mellifera mellifera*—the European honeybee—is extraordinarily rich. As the sommeliers of the plant world, and alchemists of sweet aromatic substance, their olfactory and gustatory senses are predictably acute. So too is their specialised mechanosensation, adapted to perceive fine detail through vibration. But above all it is their vision that inspires most envy. Honeybee vision, just like human vision, is trichromatic (i.e.

they see in full colour), but spectrally shifted towards the ultraviolet end at the expense of some of the deeper red shades (Avarguès-Weber, Mota and Giurfa, 2012). With a “shutter” rate five times that of human sight (Riddle, 2016), bees can rapidly pick out the hues of single flowers within a dense meadow as they fly at speed. In addition to the intricate patterns of ultraviolet florescence on petals that guide bees to nectar sources, startling, sporadic flashes of light-plasma erupt from the swinging power cables that criss-cross their paths from hive to pollen source during episodes of (man-made) corona discharge (Tyler et al., 2014). As backdrop to all this is the sky, rippled with textured, ‘polarised light’ that can aid in orientation when the sun and other navigational celestial bodies are occluded by clouds (Kraft et al., 2011: 707).

Honeybees travel vast distances in search of sources of nourishment (they will comfortably, and repeatedly, fly as far as three miles for a good pollen flow and then back again) and must be able to communicate the location of the food sources they have discovered to a precise degree of detail in an ever-changing environment. They have evolved to possess what amounts to a highly complex cognitive system, and a unique means of effectively conveying elaborate information, the most famous example of which is the *waggle dance*.

In the very first instance, no dance is performed unless foraging by further bees is worthwhile, i.e. unless there is sufficient pollen or nectar to merit the journey. The very fact that a dance is performed communicates that a calculation has been made and a beneficial effect has been anticipated. The waggle dance is used for those instances when food sources are 100m or further from the hive. The scent attached to the dancer alerts her audience to the type of flower in question, and the exuberance of the waggle indicates the potential magnitude of the haul. The tempo of the movement (a squat figure-of-eight progression) communicates the distance of travel and the direction is described in the orientation of the central line of the eight (see *Figure 1*.)

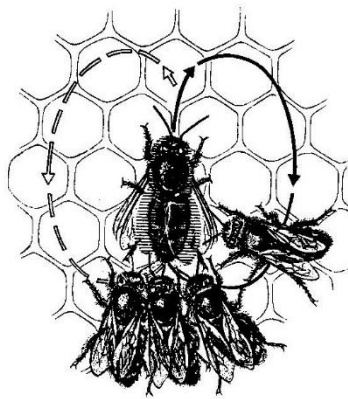


Figure 1 'The tail-wagging dance. Four followers are receiving the message.' (From von Frisch, 1967: 57)

As we saw in Chapter X (Section 2), all autopoietic organisms (i.e. things which are alive and motivated to maintain a molecular reaction network contained within a boundary of itself, see: Thompson, 2004: 386-7) interact with their environment on the basis of what is 'biologically meaningful' (Von Uexküll, 1992: 327). For example, in the case of honeybees, pollen provides a rich source of amino acids required to nurture growing larvae. That pollen is a vital source of nutrition for bees is not an inherent property of pollen itself. In fact, from a plant perspective, pollen is a mass of the precious gamete-containing micro-spores (i.e. plant sperm). Organisms exist in constant inter-relation with their environment, experiencing the world through, and as, their *Umwelt*. From an enactive, neurophenomenological perspective then, 'living is sense-making' (Thompson, 2004 :386).

Within the framing of such worlds, organised and experienced as they are by salient information (more on this later, in Section 4.) necessary to promote the survival of any given organism, possessing the ability to share and to be the recipient of shared information surely confers some advantage. Communication, even in its most rudimentary form, functions as 'a form of belief and desire transfer: cognition by proxy' (Origg and Sperber, 2000: 150). As the scout bee loops her lemniscate across the comb, wagging her tail with enthusiasm, complex information is transmitted from one organism to another, in a manner that makes clear sense to the receiver. *A productive source of pollen exists, worth the flight of several bees; 1313m away; 243° WSW.* Communication then, in all forms, can be thought of as an adaptive evolutionary mechanism. But how does it work?

For non-human communication, a code model seems to be a sufficient explanation:

A code can be viewed as a systematic pairing of stimuli and cognitive responses shared by communicators, such that the production by a communicator of a stimulus belonging to the code has (both for communicator and audience) the function of producing the associated response in the audience (Origgi and Sperber, 2000: 149).

A bee will perform her waggle dance to encode certain specific information that may easily be decoded by observing bees who share the bee-code.¹⁷ All across the animal kingdom (and arguably in parts of the plant world too, see: Karban, Yang and Edwards, 2014; Manusco, 2018), communication is achieved in this way. What is essential for this code-based communication to work, is that the signifier remains consistently wedded to the signified.

To an extent, this model also works for human communication. Language may be seen as a repertoire of sounds (phonemic representations) and associated orthographic symbols paired with meanings (culturally agreed semantic representations) that is organised by a natural, generative syntax (see Chomsky, 2000). This certainly accounts for a large portion of human communication (both linguistic and paralinguistic) but there is much more yet that remains unaccounted for by this model. Language has evolved as something wondrously (and necessarily) complex, but as such always takes place at a risk. Human meaning has room for slippage in a way that honeybee meaning does not.

¹⁷ However, note that the information encoded by the waggle dance may be broken down further into two distinct types. While data pertaining to direction, distance and quantity are encoded into the dance, and may be thought of as natural signals, the floral source type is communicated by the scent carried back on the body of the dancer, and as such is more of a natural sign. See: Wharton (2009) for distinction and discussion.

2. Meaning and intended meaning

...what words mean is a matter of what people mean by them.

(Grice, 1989: 340)

Where semantics has traditionally centred its attention on conventionalised or coded linguistic meaning, the field of pragmatics developed in recognition of the fact that linguistic meaning may differ from speaker meaning. The context of any given utterance, and knowledge of its utterer sometimes subtly, and sometimes dramatically influences how the utterance is understood. For most human language interactions, it is essential to first, semantically decode and second, pragmatically infer in order to arrive at a speaker's intended meaning.¹⁸

Most influential in this area was arguably the work of Paul Grice (1957, 1975a, 1989) who sought to explain how it could be—if meaning is coded and static—that conversational communication sometimes fails. Grice (1957) began by philosophically dissecting the meaning of the word ‘meaning’ and it is from his eventual distinction between what he termed *natural*_(N) and *non-natural*_(NN) meaning that the role of (inferred) speaker intentions in utterance interpretation gain their significance: as we shall see.

According to Grice (1957: 377), there is a categorical difference in the denotation of the word ‘mean’ in the following two examples:

- (1) Those spots mean measles.

¹⁸ I qualify here saying ‘in most’ human language interactions, for although both types of code- and inferential-based modes of meaning processing do typically dovetail in human communication, as Wharton (2009: 122) points out; ‘neither is essential for communication to take place: pure coding-decoding requires no inference, and inferential communication can take place in the absence of any code.’

- (2) Those three rings on the bell (of the bus) mean that the bus is full.¹⁹

In the instance of (1), meaning here is the kind that allows us to infer from one thing in the world that another thing must be so. This type Grice termed natural meaning (or meaning_(N)). It is worth noting, however, that not all instance of meaning_(N) are the same. Some things, such as red, itchy spots on skin mean_(N) measles, are *factive*, in the sense that they carry information which provides evidence for certain conclusions. These are what Wharton (2009), calls ‘natural signs’. In contrast to these are ‘natural signals’: things such as the waggle dance of the honey bee and the alarm calls of vervet monkeys which have the *function* of carrying information to a recipient. In other words, ‘they are inherently communicative and owe their existence to the fact that they convey information’ (Wharton, 2009: 13).

The second kind of meaning, involves intentions of some sort. Imagine the autistic doctoral student with poor proprioception who stumbles over her own feet and, putting her hand out to steady herself, finds it in the lap of an unexpectant stranger. The awkward and rapid explanation “I didn’t mean to do that!” might just as well be “I didn’t intend to do that”. In the case of rings of the bus bell in (2) above; ‘the three rings “mean” that the bus is full in that the conductor intends us to infer this from his behaviour’ (Clark, 2013: 45). Grice called this type of meaning non-natural meaning (or meaning_(NN)). It may, of course, be that the bus is not in fact full. Perhaps a gaggle of boys bundled on at the front and nipped out the back while the conductor was busy answering an elderly passenger’s query. It cannot be said, then, that the three rings of the bell mean_(N) that the bus is full. But what is important is that the conductor believes it is full and intends for all within earshot to also share this belief. If this is so, perhaps it is adequate, then, to say that if person A (here: the conductor) intends to induce (by means of ringing the bell three times) belief P (that the bus is full), this counts as an example of meaning_(NN)? According to Grice: not quite.

¹⁹ Remember that these examples hail from a time (1950s) when buses were attended by conductors, with bell-ringing duties.

For a communicative act to mean_(NN) something, according to Grice (1957), it is necessary that it both has an intended effect on its audience (such as the belief: ‘the bus is full’) and that the intention to communicate is evident (the conductor is ringing the bell three times so that I know that the bus is full).

“A meant_{NN} something by *x*” is (roughly) equivalent to “A intended the utterance of *x* to produce some effect in an audience by means of the recognition of this intention” (Grice, 1957: 385).

For something to mean_(NN) something, it is not sufficient, for example, to induce a belief in another by covert means. To demonstrate this, Grice (1957) provides the exemplum of a devious murder-meddler. Say I happen upon a recent murder scene, and decide to make use of such peculiar fortune to implicate my arch enemy in its undertaking. I happen to have their earring upon my person, and drop the earring near the body. According to Grice (1957), the earring (or my placing it there) cannot be said to mean_(NN) anything. It may (falsely) be interpreted as a natural sign: meaning_(N) that my nemesis is the murderer. However, while my act of placing the red herring was intended to induce a certain belief, it was more a case of ‘getting someone to think’ rather than ‘deliberately and openly letting someone know’ (Grice, 1957: 382). In this sense then, meaning_(NN) belongs to communication that is *ostensive*: a characteristic that is outlined in greater detail in Section 3.

When I was a child, we had a family ritual that we’d undertake several times each summer. We would visit the arcades on a nearby pier (Worthing, Hastings, Bognor...) and our parents would give me and my sister £2.50 “crazy money” each that we would change down into small coins held in a paper cup, and use to entertain ourselves for the proceeding hour. The arcades were bright, and noisy, but consistently so, and familiar. I

would allow the flashing neon lights and loud honks, the high-pitched bells and manic chittering of the machines to merge with the waves lapping beneath us and to lull me into a state of suspended animation. I'd push copper-played two-pence pieces into the thick slots of my chosen machine in time with its regular mechanical breathing, swaying with it, and let the endlessly falling shiny things purify my insides.

My sister was different. She'd begin with me on the two-penny machines but would soon become bored, and race excitedly from grabber to fruit machine, to shoot-em-ups to race-car simulator. Her favourite above all, however, was Zoltar the Fortune Teller. An austere and imposing (to a small child), life-sized animatronic figure, he sat inside his esoterically-bedazzled glass booth, staring stoically ahead. He was pricey, but he paid dividends. Once the coins had landed he would lurch into his prophetic performance, and as a parting gift your fortune would emerge on a small paper ticket...

Consider the following utterance, presented to you on a small slip of paper, purportedly by a being that can see into your future:

(3) Don't worry about going bald!

How would you interpret such a message? As with most utterances, there are several possibilities: some of which might include the following.

- i) Going bald is not something for you to be concerned about (as it will never happen).
- ii) Stop worrying about going bald when you have worse things to worry about.
- iii) You are going to go bald, but it won't be so bad. Let it happen and don't fear it.

In the above cases i), ii), and iii), each potential interpretation has been reached by decoding the semantic meaning then inferring whatever may have been communicated both indirectly and, crucially, intentionally (termed *implicature* by Grice, 1975a). The obvious next question might be: how are we to know something that has been communicated indirectly?

To help explain the derivation of implicatures, Grice (1975a) proposed that communication is in fact a cooperative affair, involving interlocutors that are more or less equally invested in communicative success. Language and communication, he argued, are driven by rational principles that may be described as maxims of conversation, and summarised under the overarching *Cooperative Principle* that stands as follows:

Cooperative principle

Make your conversation contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

Maxim of Quantity

- (i) Make your contribution as informative as is required (for the current purposes of the exchange).
- (ii) Do not make your contribution more informative than is required.

Maxim of Quality

- (i) Do not say what you believe to be false.
- (ii) Do not say that for which you lack adequate evidence.

Maxim of Relation

- (i) Be relevant.

Maxim of Manner

- (i) Avoid obscurity of expression.
- (ii) Avoid ambiguity.
- (iii) Be brief (avoid unnecessary prolixity)
- (iv) Be orderly.

(Grice, 1975a: 45- 46)

The above is perhaps the contribution for which Grice is most well-known, but it is pertinent to this thesis on account of its assertion that communication is, ultimately, a collaborative and cooperative act. Speakers wish for their communication to be successful, and will construct their utterances in accordance with the principles and maxims that will support this. Crucially, believed Grice, if following the cooperative principle, utterances will ‘at some level’ (Clark, 2013: 50) be relevant. If the relevant meaning is not obvious from what is linguistically encoded, listeners will assume an extra layer of indirectly expressed meaning: an implicature.

But what does it mean, exactly, to ‘be relevant’? Grice himself acknowledged that this area of his theory could benefit from further development:

Though the maxim itself is terse, its formulation conceals a number of problems that exercise me a good deal: questions about what different kinds and focuses of relevance there may be, how these shift in the course of a talk exchange, how to allow for the fact that subjects of conversations are legitimately changed, and so on (Grice, 1975a: 46).

It is all very well to claim that cooperative communicators speak, for example, truthfully or perspicuously (unless ‘flouting’ or ‘violating’ the maxims: see Grice, 1975a), as these are relatively easy qualities to define. But to suggest that speaking relevantly is an additional consideration is somewhat more problematic; relevance is surely an emergent property of any given context or interaction, involving some knowledge of the interlocutor and as such, potentially hard to pin down.

Returning to the Zoltar / baldness example for one moment: the problem for my sister, then, was that she was not dealing with a living, breathing fortune-teller but an automated facsimile. Unfortunately for her, she was too young to make this distinction. With limited additional information about the ‘speaker’ available, isolating the correct interpretation of his utterance fell to plain old guesswork. Zoltar, despite her pawing at the glass and pleading, remained decidedly uncooperative. For my sister, the outcome of this guesswork led to lifelong phalacrophobia, or, fear of going bald.

How then do we, as listeners, so frequently arrive at the correct implicatures and, as speakers, ensure that this might be so? The question isn’t so much ‘why does communication sometimes fail’, but ‘how does it ever succeed when the scope of possible interpretation is infinite’. Sperber and Wilson (1986/1995, 1987, 1997, 2004) took Grice’s groundwork as a starting point and applied knowledge from cognitive science, to try to provide an answer.

3. Relevance Theory

There is a point where too much information and too much information processing can hurt. Cognition is the art of focusing on the relevant and deliberately ignoring the rest.

(Gigerenzer and Todd, 1999: 21)

Relevance theory (Sperber and Wilson, 1986, 1987, 1997; Wilson and Sperber, 2004) is a cognitive-inferential model of utterance interpretation. As we saw in the previous section, Gricean pragmatics made the novel contribution of setting the expression and recognition of intentions at the centre of human communication. Relevance theory builds on this, attending, specifically, to those instances of communication where communicators make manifest their intention to communicate something: i.e. where the communication is what might be called ‘ostensive’ (Sperber and Wilson, 1986/1995: 49).²⁰ In this sense then, the remit of relevance theory is clearly defined and not an attempt to provide an impossibly ambitious ‘theory of everything’ (Chomsky, 2000: 70), as might be required of a theory of a term so broad as ‘communication’.

At its core, the central claim of relevance theory is that ‘the expectations of relevance raised by an utterance are precise and predictable enough to guide the hearer toward the speaker’s meaning’ (Wilson and Sperber, 2004: 607). This expectation, they argue, arises not because speakers are bound to follow the Cooperative Principle or conversational maxims, but ‘because the search for relevance is a basic feature of human cognition, which communicators may exploit’ (Wilson and Sperber, 2004: 608). This idea, that our minds must be economical with what we notice in a vastly information-rich world is reflected in contemporary theories emerging from the cognitive sciences that were beginning to explain

²⁰ See Wharton (2008) for detailed discussion of the differences between Gricean and relevance-theoretic treatments of intentions.

rational inferencing in terms of ‘fast and frugal heuristics’ (see: Gigerenzer and Todd, 1999). This perspective, I believe, is highly compatible with the enactive and embodied theories of cognition (see Chapter X, Section 2; and above, this chapter, Section 1) that have also informed the thinking behind this thesis, and run in parallel with what has been termed the *free energy principle* (see below, Section 4).

Relevance theory puts forward two principles—a *Cognitive* and a *Communicative Principle of Relevance* (Sperber and Wilson, 1986/1995, 1987, 1995; Wilson and Sperber, 2004)—by which utterance interpretation is understood to be guided. The first, the Cognitive Principle, definitively places the search for relevance at the centre of both human cognition and more specifically, utterance interpretation. An input is considered to be relevant when its processing, within the available context, produces some positive *cognitive effect*, i.e. ‘a worthwhile difference to the individual’s representation of the world’ (Wilson and Sperber, 2004: 608).²¹

At each point in a discourse, the hearer has at the forefront of his attention a different set of assumptions, which he may never have processed together before, and may never process together again. By working out the synthetic implications of this set of assumptions, he can acquire new information... (Sperber and Wilson, 1986: 118).

The addition of an input that is relevant, when processed alongside existent assumptions, will lead to a strengthening or contradicting of said assumptions, or the generation of new conclusions (*‘contextual implications’*: Wilson and Sperber, 2004). Is it not, of course, simply a question of whether something is or is not relevant. At any given moment there will be any amount of potentially relevant information available in our sensory-perceptual field, and any number of potentially relevant interpretations of an utterance. As a property, relevance is measured by degree, and as a guiding principle for utterance interpretation, by

²¹ Relevance and truth do not always co-occur; we may derive false conclusions from inputs, and fictional works may generate for us relevant effects, hence the ‘positive’ qualifier in ‘positive cognitive effects’. See: Clark (2013), Van Der Henst, Carles, and Sperber (2002) and the Second Edition of *Relevance: Communication and Cognition* (Sperber and Wilson, 1995).

finding the sweet spot between least cognitive efforts made for the greatest cognitive effects gained.²²

Relevance of an input to an individual

- a. Other things being equal, the greater the positive cognitive effects achieved by processing an input, the greater the relevance of the input to the individual at that time.
- b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time (Wilson and Sperber, 2004: 609).

With this in mind, according to Wilson and Sperber (2004: 613) such a relevance-guided comprehension procedure may, in practice, look like the following:

- (a) Follow a path of least effort in computing cognitive effects. Consider interpretations (e.g. disambiguations, reference resolutions, contextual assumptions, implicatures) in order of accessibility.
- (b) Stop when your expectations of relevance are satisfied (or abandoned).

The expectation of relevance is crucial here, and is attended to by the second, the Communicative Principle, which positions all ostensive communication as having been given with a ‘presumption of its own optimal relevance’ (Sperber and Wilson, 1986: 158). Because human cognition is geared towards the maximisation of relevance, speakers can

²² There are numerous factors that may affect the level of effort required to process an input (such as ‘recency of use, frequency of use, perceptual salience, ease of retrieval from memory, linguistic or logical complexity and size of the context’, Clark, 2013: 104). It is plausible that for monotropic individuals (see Chapter X, Section 1.2.2), who process information within a narrowly and acutely-focused attentional tunnel, the degree of effort required to process input emanating from beyond the immediate area of heightened focus may be significantly higher: potentially to the detriment of the typically expected back-and-forth rhythm of ordinary conversation. This idea is revisited in Chapter R.

craft their communication to take advantage of this fact. The oft-cited example is that should I feel thirsty and wish for more wine, I might place my empty glass within my friend's eye-line, intending for him to notice and offer me another. In this case, while I did seek to benefit from his natural predisposition to make relevant inferences, my communication would not count as ostensive, for I did not make my intention to communicate my desire for a top-up clear. Should I wish to make my desire for wine (*the informative intention*) known, I might waggle my glass, give a little wink or (if I'd already had a few) bark "TOP ME UP!" or in other words: provide an *ostensive stimulus*.

Relevance theory posits, then, that any ostensive stimulus carries a *presumption of optimal relevance*. In providing such a stimulus, the utterer must believe it to be worth the processing effort of the intended receiver. The audience of an utterance may, as such, be entitled to expect this. Additionally, it is clearly most beneficial for a speaker, in order to ensure understanding, to craft her utterance so as to be optimally relevant to her audience (limited, of course, by her knowledge of her audience, the shared context and the assumptions that these can entail). Wilson and Sperber (2004: 612) summarise these principles as follows:

Communicative Principle of Relevance

Every ostensive stimulus conveys a presumption of its own optimal relevance.

Presumption of optimal relevance

- a. The ostensive stimulus is relevant enough to be worth the audience's processing effort.
- b. It is the most relevant one compatible with communicator's abilities and preferences.

In line with the central tenet of Grice's Cooperative Principle (1975a)—that speakers wish for and work towards successful communication—Van Der Henst, Carles, and Sperber (2002) describe what they term a 'helpful speaker'. Using the example of being asked for the time, they argue that a (helpful) speaker will usually round their answer rather than

provide the precise minute (i.e. 10.40 rather than 10.37). The reason for this, they suggest, is that speakers ‘are always trying to achieve relevance to their hearer’ (Van Der Henst, Carles, and Sperber, 2002: 457), and as such will offer an answer that may allow the hearer to derive as relevant consequences, with as little processing effort, as possible.

Recall in Chapter X, Section 1.2.3, the description of the empirical work pointing towards the negative thin-slice judgement often made by non-autistic people about autistic people (e.g. Morrison et al., 2019a; Sasson et al., 2017). In such instances, non-autistic speakers are very quickly deciding that they would not feel comfortable engaging in a conversation with the target autistic person (Sasson et al., 2017). The third of Van Der Henst, Carles, and Sperber (2002)’s three time-telling studies involved a measure of the extent to which a person asked for the time will take into account the inferred relevance requirements of the enquiring stranger. They found that when the time was requested along with a declaration of an impending appointment, the closer the minute of the appointment time, the less rounding that took place. From this the authors concluded that speakers were considering the needs of the asker, and providing more precise answers when it could reasonably be inferred that this information is pertinent. Although the experiments feature rather simple exchanges (asking for the time), they did seem to demonstrate the mindreading abilities (i.e. the inferring of intentions) theorised to be at the heart of an ostensive-inferential model of communication. Mindreading is already made (more) difficult between autistic and non-autistic people by the greater gap between the types of minds and the way that they are organised (explored in detail in Chapter F). When this difficulty is augmented by an unwillingness to engage (as found by Morrison et al., 2019a and Sasson et al., 2017) it is quite possible that this affects a speaker’s willingness to make the extra efforts necessary to achieve mutual understanding and optimal relevance. How this may relate to the DEP, and the notion of being willing to make extra efforts as a speaker are both addressed in Chapter F (in particular Section 3.3).

3.1 Communicative effects

In the previous section, cognitive effects were introduced as beneficial modifications of the addressee’s previously held facts and assumptions, either by introducing new assumptions

or by strengthening or contradicting existing assumptions.²³ In this sense, cognitive effects may be thought of as the inferential material generated within a cognitive system by which the propositional content that a speaker has intended to communicate, is derived.

As Wilson and Carston (2019: 32) explain, *speaker meaning* (determined from Grice's non-natural meaning_(NN)) is generally understood to be definable by the following characteristics:

It can be:

- rendered without loss as a single proposition, or a small set of propositions
- duplicated in the minds of speaker and hearer; and therefore
- added to the common ground and taken for granted in the rest of the conversation

While this description works well for speaker meaning with clearly delineated propositional content, a number of scholars have argued that the so-called 'ineffable', or *non-propositional* content that is also undoubtedly communicated by some utterances, ought to be included in any serious cognitive account of utterance interpretation (e.g. see: Blakemore, 2011; Kolaiti, 2019; de Saussure, and Wharton, 2019; Wharton, 2009; Wharton and de Saussure 2020, forthcoming; Wharton and Strey, 2019; Wilson and Carston, 2019).

Consider, for example, the following:

²³ Such a set of any individual's presently accessible facts and assumptions is referred to, in relevance theory, as their *cognitive environment* (Sperber and Wilson, 1986, 1995). There—clearly—is greater technical detail involved but I believe that this, along with the related concepts of *manifestness* and *mutual manifestness* (*ibid.*) are best dealt with in the following Chapter (C), specifically in Sections 4 and 4.1.

- (4) I could murder for a sandwich right now
- (5) *In response to (4), and in an ostentatiously warbling, meek tone:*
- I'm so hungry!
- (6) Granny's breath was my heartbeat (from Prahad, 2017, *The Secret Life of a Black Aspie: A Memoir*: 28)

In (4), 'murder' would typically be thought of as hyperbolic, in (5), the utterance in its entirety as echoic and parodic, and (6) as an example of metaphor.²⁴ In each of these cases, speaker meaning is not reducible to a single proposition or small set of propositions. Figurative uses of language, irony and expressives are further common features of language that also carry non-propositional meaning (Blakemore, 2011; Wharton and de Saussure, 2020, Wilson and Carston, 2019). But if not propositional, and involved directly in the altering of an addressee's previously-held facts and assumptions, how can the effects of these descriptively ineffable aspects of communication be qualified and explained?

Non-propositional effects 'present a challenge to pragmatics' (Wilson and Carston, 2019: 32), and as such have tended to be sorely neglected in pragmatic theory, notwithstanding the interest of some dedicated theorists (see above). Within the small field of study, several different types of non-propositional effects have been identified, including: *poetic effects* (Sperber and Wilson, 1986, 1995); *perceptual effects* (pertaining to what has been termed *aesthetic relevance* and associated with the 'poetic mind': see Kolaiti 2008, 2019, Wharton and Strey, 2019); and *affective* or *emotional effects* (Wharton and de Saussure 2020, forthcoming; Wharton and Strey, 2019; Žegarac, Caley and Bhatti, 2015).

Affective effects are the most significant for the discussion to come, but are incredibly slippery to define. Relevance theory is an unashamedly cognitive account of utterance interpretation and philosophers and theorists have long struggled to reconcile reason with

²⁴ Yes, autistic people can be capable of interpreting and generating novel metaphors.

emotion. Yet as Wharton has variously argued (Wharton and Cornell, forthcoming; Wharton and de Saussure, 2020, forthcoming Wharton and Strey, 2019), not only is something of the affective domain frequently communicated alongside the propositional content of an utterance, emotion may also play a crucial role in the sensorimotor and cognitive processes involved in sense-making.

Expressives are just one of many features of communication (e.g. facial expressions and non-ostensive gesture, affective tone of voice, interjections, etc.) that may give rise to affective effects, but serve here as a useful example. In analysing the difference between an expressive such as “*that total sweetheart*, Gemma Williams, has been a dream PhD student” and its propositionally identical, but less affectively rich counterpart (“Gemma Williams has been a dream PhD student”), Wharton and de Saussure (2020) point out that in the former example an affective state belonging to the speaker (and related to the propositional content of the utterance) is additionally communicated.²⁵ Such information, perceived by the addressee:

...is the external manifestation of an emotional attitude, directly exhibited. That very element is much more than the description of a mental state. Expressing emotions with an epithet like ‘total prick’ about some individual is something else than describing someone as having the property of total prickness. It is in this sense that what these elements convey is descriptively ineffable... Wharton and de Saussure (2020: 8).

It may be descriptively ineffable but, if Wharton and his colleagues are right, then just as human cognition is geared towards the maximisation of relevance, affective effects constrain the parameters of what may be perceived as salient, essentially reducing the effort required to achieve optimal relevance. In the case of fear, for example, the emotion may trigger a hyper-vigilant state, whereby the experiencer attributes more salience to finer-grain sensory-perceptual inputs (minor creaks on the floorboards in the next room, etc). In terms of communication, if the strained, hushed tones and widened eyes (either ostensibly

²⁵ A verbatim quote (perhaps) from my primary supervisor, Dr Tim Wharton...

exaggerated or instinctual and unintended) of a communicator experiencing fear are registered by an addressee, the addressee may perceive fear, infer some kind of threat, become fearful themselves and adopt their own hyper-vigilant state. Such a phenomenon of rapid emotional state transfer has long been recognised in crowds and is often referred to as ‘emotional contagion’ Hatfield, Cacioppo, and Rapson (1992).

Drawing on Sperber and Wilson’s (1986, 1995) suggestion that one of the main benefits of ostensive communication is the fact that it develops and strengthens what is shared between two interacting minds (or, the *mutual cognitive environment*: see Chapter C, Section 4), Wharton and Strey (2019: 261-2) propose that:

...it does not seem too implausible a claim to suggest that the same may be true of emotional communication. Just as an awareness of the beliefs of others can have important consequences for successful interaction with them, so might an awareness of their emotions be beneficial also.

I would like to extend this further, and suggest that affective effects may also have some pay-off in the domain of intersubjectivity. Wharton and his colleagues’ accounts of affective effects (Wharton and de Saussure 2020, forthcoming; Wharton and Strey, 2019) offer an initial explanation for how emotional content may not only constrain and enrich a search for optimal relevance, but also transmit something of the emotional states themselves alongside propositional content of communication. Such emotional communication, then, both supports ostensive-inferential communication and facilitates non-propositional mutual understanding. It allows for a shared affective repertoire to be developed. Emotions, as Wharton and de Saussure (2020: 19) remind us, are surely qualia. Affective effects provide some small (but non-trivial) means of, if not sharing in another’s *Umwelt*, experiencing a close facsimile. It is surely evolutionarily rewarding to feel ‘in tune’ with another.

3.1.1 Relevance theory and rapport

If emotional communication has received little attention from cognitive theories of utterance interpretation, *rapport* has received even less. Rapport is a highly intuitive characteristic of conversational interaction, that, for these purposes, might best be operationalised as involving mutual attentiveness (creating focused and cohesive interaction); mutual affective-emotional positivity; and behavioural coordination, or being ‘in sync’ (Tickle-Degnen and Rosenthal, 1990). Being a property of relation between individuals, it has rather been abandoned to the social scientists. However, as Sperber and Wilson themselves (1997) have emphasised: their work on relevance theory draws influence from, and has import for, the domains of both the cognitive and social sciences. Communication is, undeniably, a social act.

It is often the delivery of an utterance that most strongly influences how we feel about a speaker, rather than its content. This was demonstrated adroitly in the study by Sasson et al. (2017), described in Chapter X which revealed that non-autistic raters would form negative thin-slice judgements about the target autistic participants across all modalities (audio; video; still photograph) but not when presented with only a transcript of what the autistic person had said. However, this phenomenon does not only affect autistic individuals; we all benefit from or fall prey to the positive or negative first impressions made of us, just as we may warm to the effortless charm of one linguist as we mingle during a conference coffee break and baulk at the awkwardness of another. These ‘impressions’ are formed by our sub-attentive perceptions of a person—the timbre of their voice, the way they blink too quickly, a comforting smell, etc—much in the same way that affective effects are generated in the kind of emotional communication discussed above.

Social interactions, such as conversations, scaffold social relations (Campbell, 1958; Gaertner and Schopler, 1998), and help to establish both rapport and a shared understanding of reality (Gaertner and Schopler, 1998; Koudenburg, Postmes and Gordijn, 2017). As Koudenburg and colleagues (2017: 50) argue, this establishing of a common ground ‘includes the implicit notion that viewpoints are shared among a collective, and therefore signals the existence of a “we”. Accordingly, social interaction plays a role in maintaining and developing a sense of *we-ness*’. This sense of ‘we-ness’ is very similar to the earlier concept of ‘entitativity’ (Campbell, 1958): the extent to which a group may possess

coherence as its own distinct entity as opposed to being an aggregate of individuals, reformulated as ‘a perceived interconnection of self and others’ (Gaertner and Schopler, 1998: 963).

One way in which this might work is demonstrated neatly by a study undertaken by Heasman and Gillespie (2019 and described in detail in Chapter C, Section 3.2.). Among small groups of autistic participants, filmed whilst playing video games together, the authors found that there was a tendency for generous assumptions of common ground (beyond what might typically be assumed in interactions between non-autistic interlocutors).

Accordingly, the generous assumptions of common ground made by neurodivergent participants allowed underlying sub-cultures to be identified, leading to the rapid construction of shared understanding, rapport and humour. When generous assumptions of common ground fail to result in reciprocated turns, it may appear egocentric to the outside observer, but when reciprocated, it can lead to increased affect, symmetry and coherence, creating a rich intersubjective space for shared understanding (Heasman and Gillespie, 2019: 919).

This, of course, refers to what Heasman and Gillespie (2019) suggest might be a specific type of intersubjectivity that emerges among autistic communicators, but what is of importance for the current discussion is the mention of affect and its central role is establishing rapport (and interactional coherence).

Just as affective effects may work to constrain the context of an utterance, or to increase the salience of (and effort required to reach) certain interpretations, so it may be that rapport amplifies certain presently held assumptions, which, in turn, reduces cognitive effort required to arrive at the optimally relevant intended meaning_(NN). Shared experiences and in-jokes lead to a larger common ground (or mutual cognitive environment- see Chapter F, Section 4.1) and shared short-hand. Rapport allows us to feel closer to another, more ‘in tune’, and as such perhaps to have more confidence in our interpretations. It may likewise be that the higher the levels of positive affect we hold for another, the more inclined we are to be ‘helpful speakers’ (Van Der Henst, Carles and Sperber, 2002) in contexts more complex than simply giving the time. If, as speakers, we generally aim to indicate optimal

relevance, constrained only by our own abilities and our knowledge of our conversation partner, then a heightened intersubjectivity between speakers may function to increase the opportunities for success and ease when determining optimal relevance.

Žegarac, Caley and Bhatti (2015: 219) explore a similar idea in their paper analysing a ‘critical incident’ that occurred in an intercultural EFL classroom where the rapport between a female EFL teacher in the UK and her ‘mainly male students from the Middle East’ was at stake. The incident itself involved the male students talking in Arabic throughout the lesson and laughing pointedly at the teacher. Taking an Arabic-speaking female student aside, the teacher determined that the boys were frequently referring to her as a “whore”. Now informed, and with some newly-acquired Arabic slang in her back pocket, she awaited the moment in the next lesson when the ringleader began his name-calling again.

She turned towards him and interrupted him saying: “Ahmed (not the student’s real name), if you call me that again I’ll kick your makwa (informal word for “back side” in Arabic) (Žegarac, Caley and Bhatti, 2015: 223).

The outcome was shared laughter with the whole class, and a marked improvement in attitude and attentiveness from all the students from then onwards. Crucially, rapport was strengthened by this teacher’s approach.

Most interesting about this paper is the way in which the authors examine the teacher’s management of the critical incident from the perspective of relevance theory: analysing how rapport was upheld according to cognitive principles of relevance. The challenge for the teacher, as they saw it, was that she needed to reprimand the students for talking (disrespectfully) in a language other than English in the classroom, whilst preserving a positive learning environment built on solid classroom rapport. According to the authors, the teacher succeeded in achieving both these aims through the single quoted utterance (above); she communicated that their behaviour was unacceptable while conveying that she accepted them as people. Žegarac and colleagues (2015: 232) note that:

...the teacher's intervention was successful, not only in virtue of the communicated information, but also—perhaps crucially so—because of its positive affective-emotional effects which were an integral part of the improved rapport between the students and the teacher.

Žegarac, Caley and Bhatti (2015: 233) go on to offer a 'sketched' account of what they term 'affective-emotional effects'. For them; emotions are (roughly) motivating dispositional states that exist outside of 'means-to-end reasoning'; affective-emotional representations are therefore technically non-cognitive, but are included among 'the effects and among the causes of cognitive (propositional mental) representations'; and communicators may induce emotions in their addressees by virtue of their communication (*ibid*). This account, so far, takes a similar perspective as the work of Wharton and colleagues, outlined in the previous section (above).

Relevance theory deals with the issue of how non-propositional objects (such as images, impressions or emotions) may be communicated, by framing the informative intention as one to make manifest (i.e. potentially accessible: see Chapter C, Section 4.1) *not* a single proposition but 'a set of assumptions {I}' (Sperber and Wilson 1986: 58). This provides scope for an array of differently salient assumptions which, combined, may form an impression (such as the impression I may wish to convey to you when I sniff ostensively, close my eyes and smile as we stand before my beehive on a warm summer's evening).

Poetic effect is the term given to that 'peculiar effect of an utterance which achieves most of its relevance through a wide array of weak implicatures' (Sperber and Wilson, 1986: 222). Rather than common knowledge, poetic effects create 'common impressions', or 'an affective rather than cognitive mutuality' (Sperber and Wilson, 1986: 224). Figurative uses of language, such as metaphor, provide paradigm examples of these kinds of vague sets of assumptions that cannot be paraphrased without loss of their poetic effect.

Žegarac, Caley and Bhatti (2015: 235) suggest that the minor changes in the manifestness (or: availability) of a wide array of assumptions that the impressions engender, 'trigger some physico-chemical changes which cause a particular aesthetic affective-emotional experience'. When these impressions are derived from metaphor, they argue, these effects

are largely aesthetic (see Kolaiti, 2008, 2019, for further discussion on perceptual and aesthetic effects). Conversely,

in communicative interaction aimed at managing rapport, such as the phatic use of language...the affective mutuality is caused by assumptions about the positive social disposition of the participants towards each other (Žegarac, Caley and Bhatti, 2015: 235).

According to this account, then, part of what is included in affective mutuality (or: rapport), is the shared assumptions of shared positive affect. These assumptions may be informed, initially, by the affective effects transmitted by the kind of emotional communication that Wharton and colleagues describe (see above), but they become part of mutual cognitive environment. This is clearly beneficial in terms of a relevance theoretic understanding of communication. Where the mutual cognitive environment also includes assumptions about mutual affect and mutual trust (as shaped by positive rapport), the need for *epistemic vigilance* (see: Sperber et al., 2010)—i.e. the mechanism adapted to guard against being misinformed— is minimised thus reducing the degree of effort required to arrive at optimal relevance.

Although the features of mutual attentiveness, affective positivity and behavioural coordination (Tickle-Degnen and Rosenthal, 1990) have widely been accepted as the primary characteristics of rapport, rapport maintains a ‘cornmeal mush’-ness (DePaulo and Bell, 1990: 305): an indistinguishable quality. Perhaps the main difficulty in capturing the essence of rapport is that it is a type of mutuality, experienced (inter)subjectively, and hard to measure accurately from the outside even when all three defining features are present (e.g. see: Nelson, Grahe, and Ramseyer, 2016). Similarly, even if one individual has the sense that they are experiencing rapport with another, there are plenty of instances of what might be called pseudo-rapport (DePaulo and Bell, 1990), such as in the case of a benevolent teacher who wishes the best for, but doesn’t particularly like, their student. In an attempt to provide a sounder explanation of dyadic rapport, Tickle-Degnen (2006) reclassifies rapport as a kind of *optimal experience* (Csikszentmihalyi, 1990). This reframing is highly pertinent

to the empirical findings of this thesis, but first we ought to explore what exactly is meant by ‘optimal experience’ and the related notion of flow.

4. Relevance, free energy, attention and flow

There is something indescribably J O Y F U L about stumbling, in sync, into a monotropic attention tunnel with another. As one autistic person I know commented, “there is no greater rush than sharing a special interest with a willing participant...”.

Time seems to expand. I have experienced it myself, with neurodivergent friends. Effortless riffing. It’s like playing jazz; no, it’s like *becoming* jazz. Your eyes are closed, your fingers find the right holes on the clarinet that, combined with your breath, at just the right moment, send a tube of throbbing thick black up to meet the blue-grey smoke of guitar riff hovering in the air: at just the right angle. The barbecue-hot sizzle of a cooking high-hat cymbal lassoing it all together with the trumpet, from the far side of the room, cutting through like a hot knife.

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‘Optimal experience’, according to Csikszentmihalyi (1990: 4) describes a phenomenological state, built around the concept of ‘flow’:

‘the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it’.

Many types of behaviour may lead us to a state of flow (colloquially referred to as ‘being in the zone’); reading an engrossing book, sitting up late writing a thesis chapter, completing a cryptic crossword on a lazy Sunday morning, playing table tennis, doing parkour, or watching the shiny, brightly-coloured pinwheels of a hand-held windmill spin in the breeze... the list is as long as there are ways to engage our attention. Flow, like relevance, may be thought of as another ‘sweet-spot’: but here between the challenge of a presently engaging task, and one’s skills or abilities to perform it. In order to induce flow, an activity must provide a challenge or a stretch of some sort, but one that is just within reach. Such conditions focus one’s attention into a concentrated stream and when this occurs, as there are limited attentional resources available for other matters, self-consciousness disappears. Perception of the movement of time may disappear, and action and awareness merge into one, synchronous, ‘almost automatic’ (Csikszentmihalyi, 1990: 53) act.

Further conditions for flow include the existence of clear goals and immediate feedback. When I am opening a hive for the first time in a season, for example, it is clear to me what my task involves (use a hive tool to unstick the roof where it has been glued with winter propolis without unduly disturbing the bees, remove the lid, inspect each frame of comb, etc.). Feedback in this instance will be immediate too. If I fumble with my tool and disturb the bees, I will have a large angry cloud gunning stings in my direction. But the goals themselves need not be complex; what is important is that one’s attentional capacity is absorbed by some clear pattern. In this way, the goal may simply be to notice—and to be

present with—the pattern, such as when music (organised auditory information) entrains the mind that attends to it (for which the immediate feedback would be the aesthetic response). Csikszentmihalyi (1990: 108) describes the various ways that the different senses may thus induce a flow state, although he concedes that ‘it takes training to be able to derive this degree of sensory delight’ from merely staring at the sky (or a pinwheel).

There are some (such as Fricker, 2020; McDonnell and Milton, 2014; Milton, 2017b, 2018b; Murray, 2018, 2020), however, who have argued that such sensory delighting, in the form of repetitive action and leading to a flow state may not require training, but in fact come naturally to those with a monotropic attention style. As was outlined in in Chapter X (Section 1.2.2), monotropism (Murray, Lesser and Lawson, 2005; Murray 2018, 2020) is an interest-based account of autism based within a dynamic, ecological, model of minds. The theory posits that ‘*interests* are what we care about, what we spontaneously give attention to, and what we value (if only briefly)’ (Murray, 2018: 1) and is founded on the premise that attention is a limited resource. Using the metaphor of light, with a widely diffused stream at one end of a spectrum and a brightly focused beam at the other, monotropic individuals are seen as those tending towards a more intense and singular attentional focus. Arguing for a re-framing of how we think about the repetitive, ritualistic ‘stimming’ behaviour often associated with autism, McDonnell and Milton (2014: 40) remind us that for autistic individuals—many of whom experience both ‘sensitivity to external stimuli and difficulties in processing multiple sources of information’—inducing a monotropic flow state (by means of stimming, or hyper-focusing on a task) provides ‘predictability and control over their environment, a sense of achievement, and in-the-moment fun’. In this sense, flow states may be utilised to manage chaotically perceived environments, and as a method of reducing stress.²⁶

Flow states, according to Csikszentmihalyi (1990), are moments of highly organised attention: something he has referred to as ‘psychic energy’. Such a phrase now carries somewhat unfortunate connotations of hauntings and spoon-bending, but Csikszentmihalyi

²⁶ The idea that flow states are adaptively beneficial for those experiencing them is generally uncontroversial, although Fricker (2020) has highlighted how the kind of extreme, intense absorption that some monotropic individuals can experience in a task can be maladaptive when it diverts attention from other survival-focused mechanisms, such as smelling smoke and noticing that the kitchen is now a-flame.

means it, I believe, in the sense of energy (dynamic processes) belonging to the cognitive domain. Organised attention (or organised psychic energy) exists, then, as the antithesis of ‘psychic entropy’ Csikszentmihalyi (1990). This kind of formulation has much in common with key concepts of *the free energy principle* (Friston and Kiebel, 2009; Friston, 2010): the statistical basis of predictive processing theories of cognition (also introduced in Chapter X, Section 2). As a theoretical linguist, I am manifestly not a statistician (and even if I were, the free energy principle is famously hard to follow even for experts, see: Freed, 2010), so what will have to be a very simplified account may go as follows.

Any autopoietic (i.e. self-maintaining) agent has a biological imperative to resist a natural tendency towards disorder, or entropy. In a constantly changing environment, state preservation is essential for survival. For example, if I were to drop a blob of ink into a dish of water, over time we would see it begin to dissipate. An ink blob has no selfhood about which it can have some sense (Nagel, 1974), and thus has no imperative to preserve its own integrity. Entropy ensues and, with time, the ink-blob-in-water becomes inky water. Living organisms, instead, are driven towards preserving what is referred to in mathematical terms as their ‘Markov blanket’, i.e. the statistical boundary between them-stuff and not-them-stuff (see: Kirchhoff et al., 2018). Within the paradigm of the free energy principle, entropy—or disorder—is formulated as (Bayesian) surprise (in terms of cognitive inputs), i.e. a degree of salience based on the divergence between incoming sensory data and priors (statistical-cognitive models of one’s reality: see Chapter F, Section 1.2. for greater detail on ‘priors’, and predictive processing accounts of autism). An adaptive agent exerts control over the degree of surprise they may be exposed to, by potentially entering a state not compatible with their phenotype, either by minimising the free energy that bounds said surprise (manifesting as an altering their internal model of the world and adjusting assumptions) or by undertaking some action. Entropy is avoided, according to this model, when an agent fine-tunes its priors or acts within its external environment to realign priors and inputs, such as when I move my hand away from a scalding radiator it brushes past.

Such an account (albeit simplified here), resonates with the underlying principles of relevance theory, namely that (human) cognition tends to be geared towards the maximization of relevance and that there is a cost involved in information processing that can be offset by potential value to the organism (in the context of relevance theory: cognitive

effects). According to the free energy principle, the brain ‘optimizes the mutual information (that is, the mutual predictability) between the sensorium and its internal representation, under constraints on the efficiency of those representations’ (Friston, 2010: 131). It seems to logically entail that such a theory may also underscore a search for relevance; organisms search for information (as derived from the environment, including other communicating organisms with whom they may be interacting) that requires minimal effort to combine with existing mathematical priors: or assumptions. Accordingly, then, there is an area of apparent incompatibility between relevance theory and the free energy principle. Relevance is determined in terms of cognitive effects but as we saw earlier, positive (or ‘worthwhile’) effects also include those that disconfirm previous assumptions (rather than only strengthening them). Isn’t the capacity for the easy introduction of information that significantly alters one’s internally-held assumptions about one’s environment a recipe for disorder and entropy? Not if we wish to preserve our long-term chances of survival in a chaotic environment. What matters is that our internal representations match the reality of environment as effectively as possible. Relevance may be the formula that drives where we direct our attention. The ensuing effects are what we use to guide the operation of minimising free energy (by either updating our assumptions or performing remedial action).

Flow, according to Pianzola et al. (2020), is one of several overlapping concepts (including *presence* and *narrative absorption*) from different disciplines that describe the same essential ‘presence-related phenomena’: involving immersive, engaging experiences that are both rewarding for their own sake, and consume large portions of our attention. For the authors, ‘subjects are *present* where they are able to enact intuitively (i.e. without the involvement of reasoning) their implicit (predictive coding) and explicit (intentions) embodied predictions’ (Pianzola et al., 2020: 2). Because presence involves concentrated engagement with incoming sensory data related to a particular task (or experience), they argue, flow states function as a means by which an agent can better track the difference between priors and sensorial inputs, thus improving its chances of both achieving its goals and minimising free energy.

We have established that flow is a state of optimal experience, arising when there is a sufficiently challenging, but achievable, task with clear goals and feedback. It involves concentrated attention, in an organised, focused stream and as such it may be adaptive, in

that such states help to reduce Bayesian surprise and prediction error, which (in terms of the free energy principle) means averting entropy and maintaining the self. Attention is a scarce resource, and both predictive coding theories of cognition and the relevance theoretic account of utterance interpretation recognise the need to be economical with its usage. Cognisers pay attention to that which accords with their interests: interests that may be informed by a biological imperative to self-maintain, or more complex, distal goals (see Grice, 1957b, and Wharton and Cornell, forthcoming, for how the psychologically complex can emerge from, and interlink with, the psychologically simple). How though, if at all, does the concept of flow fit into a relevance theoretic understanding of communication?

Rossen-Knill (2011), a pedagogical theorist and teacher of writing, may have the answer. Flow, she argues, is an essential characteristic of good writing: it is ‘the natural forward movement that carries the reader through the text’ (Rossen-Knill, 2011: 39). Yet teaching students to write fluidly can pose a difficulty. Traditional methods, such as encouraging learners to focus on transition words, or to apply rhetorical principles (that may impose a reliable pattern) are rather static approaches and run the risk of ‘imposing a structure on a set of ideas rather than developing a structure that is integral to the writer’s intended meaning’ (Rossen-Knill, 2011: 40). Her method is to provide students with an explicit knowledge of relevance, based on relevance theory, and to treat writing as an act of communication that carries its own, dynamic, expectation of optimal relevance. Each sentence (and each paragraph) creates expectations about relevant information to come in the subsequent sentence (or paragraph). Crucially, she argues, a ‘definition of relevance also helps one understand why flow matters: a high degree of flow minimizes processing effort, whereas a low degree of flow increases processing effort’ (Rossen-Knill, 2011: 48).

This brings us back in something of a full circle, to Tickle-Degnen’s (2006) assertions that rapport may best be thought of in terms of optimal experience, and flow. In different but related ways, both flow and rapport may reduce the cognitive efforts required to process an utterance. Tickle-Degnen’s account really only extends to the non-verbal behaviours that occur within dyadic interactions, but as Wharton (2009) has discussed at length, given that communication is not simply an act of decoding encoded messages, it is virtually impossible to completely separate its verbal and non-verbal components. I would argue, too, that the linguistic component of communication poses a challenge that may be optimal or

suboptimal—according to the skills and compatibility of speakers—much in the same way that reading an engrossing book can create flow, through the medium of words.

Intuitively, one means of achieving flow is through engaging in social interactions with others with whom we have an affinity. Many of us have lost hours on the phone to a good friend, or sat in a coffee shop together, talking and laughing, surprised when the lights are dimmed and music abruptly ended in time with an ostensive cough from the barista. Mutual understanding, rapport, and flow may not be contingent on one another, but they certainly promote each other, and often emerge together.

Milton (2017b: 1675) has asked whether ‘flow-like states of dynamic quality [could] be said to ward against alienation and anomie, increase a sense of well-being and reduce negative experiences of stress?’. This is an intriguing and important question—particularly given that such states of ‘social flow’ can be ‘a rarity in the lives of many people on the autistic spectrum’ (McDonnell and Milton, 2014: 43)—and is one that is revisited later, in Chapters R and D in discussion of the empirical findings of the thesis. For now, though, in the next chapter we narrow our focus to look more closely at autistic communication, and explore how relevance theory may offer an alternative perspective on what has traditionally been thought of as autistic pragmatic impairment.

Chapter C: Language use and autism

*Why wouldn't I be confused with language, people have their own meanings;
People don't say what they mean and often they don't want to say what they
mean.*

(Patricia Delmar, autistic woman, in Walsh, Delmar and Jagoe 2018: 117)

This chapter probes the relationship between autism and language use. Section 1 prods at what it means to be an 'impaired' speaker and defines the parameters of 'autistic language use' for the purposes of this research. It considers how it might be to have a voice that isn't (fully) understood, or (fully) heard, and briefly touches on the personal and social implications of this: the condition of 'ethical loneliness'.

In Section 2, an overview is provided of how language use in autism has been studied and defined over the years from Kanner's (1943) early observations, to contemporary empirical research within an intersubjectivity framework. Finally, in Section 3, an argument for relevance theory and, more specifically, *mutual manifestness* is put forward as a potential means for explaining the pragmatic impairment that has been traditionally associated with autism.

1. On not having a voice

On the 14th February 2019, Alex Oates' 'All in a Row' play premiered at the Southwark Playhouse in London. Set the night before minimally-verbal autistic 11-year-old Laurence is sent to a live-in residential school for children with disabilities, the play follows the family's final evening together.

The mother drinks; the father smokes surreptitious spliffs and defecates on his wife's pillow, blaming the son.

Laurence's social worker calls by and blithely speculates as to whether disabled people are animals wrongly reincarnated into human bodies.

The mother, Tamora, is played by Charlie Brooks. The father, Martin, by Simon Lipkin. Michael Fox performs the role of Gary, Laurence's 'carer'.

Laurence, by contrast, is a sallow, lifeless, fixed-eyed puppet.

As described in Chapter A, 'communication' was identified as the second of ten priorities for research and intervention in the recent James Lind Alliance priority setting partnership with British autism research charity Autistica (Cusack and Sterry, 2016: 6). Difficulties with understanding, and with making oneself understood, have a significant impact on quality of life for many autistic people.

This research deals primarily with those autistic people who use language to communicate almost all of the time, the 'almost' allowing for the moments of slippage that can occur during instances of overwhelm when it is not uncommon for some autistic people, such as myself, to become temporarily mute (see: Shah, 2019; Steffenburg et al., 2018). Whilst this thesis attempts to use relevance theory as a means of explaining the breakdown in mutual understanding that can occur between autistic and non-autistic speakers engaged in a fluid back-and-forth, it is important to be mindful that many autists never develop the ability to speak with much fluency; some autistic individuals will never be more than very minimally verbal. (DSM-5 criteria—APA, 2013; Rose et al., 2016).

At the heart of this work is a desire to uncover why it might be that autistic people can often go 'unheard', so that this might be remedied. Being understood and being listened to are two

separate, yet connected, phenomena. Having language (use), and having a ‘voice’ are similarly entwined. Where speaking autists can suffer a lack of understanding: non-speaking autists can suffer a lack of belief that they possess a subjectivity worth communicating. Many autobiographic accounts by non-speaking autists who have learned to use (sometimes incredibly laborious) alternative means to communicate, or developed verbal communication at a later age, now exist to counter this grave misconception (e.g. Fleischmann and Fleischmann, 2012; Kedar, 2012; Higashida, 2013; Mukhopadhyay, 2000; Pentzell, 2013, Prahlad, 2017). That is not to suggest, however, that mastery of verbal communication through whatever means should be the decisive factor for the bestowing of personhood. There are many ways of being in this world.

1.1 (Ethical) loneliness

Loneliness is a ‘universal affliction’ (McGraw, 1995: 43) that almost all people will experience at some point in their lives. For many it is a more serious, pervasive and distressing state. Often described as the ‘discrepancy between one’s desired and achieved levels of social relations’ (Perlman and Peplau, 1981:32), loneliness is a risk factor for various health problems and increased mortality rates (e.g. Binnie, 2019; Holt-Lunstad, Smith, and Layton, 2010; Valtorta, 2016; Wong et al., 2017).

Autistic people are especially prone to loneliness and social isolation (National Autistic Society, 2018). For autistic people, loneliness is additionally associated with increased depression and anxiety (Mazurek, 2014) and self-harm (Hedley et al., 2018). One theory of autism that gained traction for some time postulated that the social difficulties observed in autistic people were borne of a reduced motivation to engage in the social world (Chevallier et al., 2012). This idea, however, has been critiqued (Jaswal and Akhtar, 2019), particularly because it does not chime with the experiences of autistic self-advocates who have more recently found a public voice and who often report a longing for social connection (Causton-Theoharis, Ashby, and Cosier, 2009).

‘Loneliness’, however, can refer to a range of experiences. And as Wong et al. (2017) rightly question, if we take as a given the oft-cited Perlman and Peplau (1981) definition of

loneliness as the gap between the number and kind of social relations that one has, and that one wants, does it entail that ‘loneliness [is] experienced only as a result of deficits in interpersonal relationships?’ (Wong et al., 2017: 1). In their cross-sectional, qualitative study investigating elderly loneliness in Hong Kong, they came to conclude that a significant factor influencing the extent to which the elderly felt lonely was a sense of increased alienation from society as a whole. As they had entered their twilight years, these elders had experienced nationally insufficient care for older people, a growing distance between themselves and the rest of society, and a disintegration of their identity within society (Wong et al., 2017: 7). They felt their voices were not heard and their lives were now insignificant. In sum, they were experiencing some degree of might be called ‘ethical loneliness’.

It is this breakdown of a connection with humanity—a connection that ordinarily is upheld by moral, ‘ethical’ principles—that causes the deepest wound of loneliness. To feel one’s needs and human rights shrugged off by others erodes one’s sense of selfhood and value in the world and it is this that Stauffer (2015) has termed ‘ethical loneliness’. According to Stauffer, ethical loneliness is ‘a form of social abandonment that can be imposed only by multiple ethical lapses’ (2015: 2), and is experienced when:

...a violated person or [a] member of a persecuted group, has been abandoned by humanity, or by those who have power over one’s life possibilities. It is a condition undergone by persons who have been unjustly treated and dehumanized by human beings and political structures [...] compounded by the experience of not being heard (Stauffer, 2015: 1).

While Stauffer’s treatise mainly deals with ethical loneliness in the context of political injustice and extreme human rights violations such as torture, this kind of ‘ethical loneliness’ seems particularly relevant when thinking about loneliness and autism. Autistic people are routinely ‘othered’ in macro- and micro-social ways (as was highlighted by the findings of Sasson and colleague’s 2017 study described in Chapter X, showing that non-autistic people tend to form unconsidered, negative opinions about autistic individuals within the first few seconds of meeting them). Moreover, as are all disabled people, they are statistically more likely than non-autistic people to suffer abuse of some form or another (e.g. Haruvi-Lamdan et al., 2020; Stalker and McArthur, 2012; Sullivan and Knutson, 2000).

In discussing what it might take to redress the harms done by society to those whose humanity has been overlooked, or intentionally violated, Stauffer suggests the following:

A survivor will need broad social support that functions as a promise that, though she was once abandoned by humanity, that will not be allowed to happen again. That is an act of world building, which is a cooperative enterprise, not a solitary endeavour' (Stauffer, 2015: 7).

It is the promise of engagement with others, and the promise that previously ignored voices will now be heard and, importantly, *listened to* that is most important for rebuilding trust in a world where all people do matter. For Stauffer, being 'heard' is crucial: wrongs must be acknowledged. But how can the autistic voice be 'heard', in the broadest sense, if it is not first understood or even acknowledged?

2. Traditional characteristics of autistic language use

The behavioural characteristics on which an autism diagnosis currently hangs are rooted in Wing and Gould's (1979) 'Triad of Impairments'. These comprise (seeming) impairment in social interaction; (social) imagination (i.e. demonstrating restricted interests and repeated or stereotyped behaviours); and communication (see DSM-5 criteria, APA, 2013). Communication, for these diagnostic purposes, 'refers to the full range of both verbal/linguistic and non-verbal (including gesture and intonation) means for interacting with others' (Tager-Flusberg, 1999: 325).

Numerous language and communication atypicalities have been associated with autism, notwithstanding an original muddying of the waters that occurred due to the conflation of autism with sometimes co-existing language impairments. So-called prototypical linguistic characteristics of autism include dysfunctional prosody (the suprasegmental intonation, stress and rhythm of speech); echolalia (the repetition of words and sounds out of context); selective mutism (see Bogdashina, 2005, or Tager-Flusberg, Paul and Lord, 2005 for detailed

overviews) and a tendency toward literal interpretations of ambiguous or figurative language (Bogdashina, 2005; Happé, 1993; Tager-Flusberg, 1999). However, it is pragmatic impairment that is most consistently observed across the diverse spectrum of autistic presentation, as well as across age, gender and (what has historically been referred to as) functioning-ability of individuals (Tager-Flusberg, 1996).²⁷

Impairments in the pragmatic use of language were noted among autistic children from the outset, as documented by Kanner (1943). A difficulty in ‘understanding that communication is about intended rather than literal or surface meaning [and] failure to view conversations as a means of modifying and extending the cognitive environment of a conversational partner’ (Tager-Flusberg, 1999: 331)—the essentials of pragmatic communication—was clearly evident among his early case studies and helped to shape the profile of autism as a condition.

An idiosyncratic use of words and phrases was taken as the most common indicator of a poor grasp on the pragmatic uses of language. For example, young Paul G., one of Kanner’s case studies, would frequently utter seemingly nonsensical utterances; “Don’t throw the dog off the balcony”; “The people in the hotel”; “Did you hurt your leg?”; and “Petten-eater” (Kanner, 1943: 227). According to Kanner:

none of these remarks was meant to have communicative value. There was, on his side, no affective tie to people. He behaved as if people as such did not matter or even exist (Kanner, 1943: 228).

However, that last rather unusual phrase (“Petten-eater!”) was thought to be traceable back to a moment when Paul’s mother had dropped a saucepan while reciting the ‘Peter, Peter,

²⁷ Functioning labels in relation to autism are falling increasingly out of favour as they are seen to confuse intellectual ability with autistic features and not reflect the complexity of fluctuating abilities in a fluctuating world. For discussion, see: Kenny et al., 2016.

pumpkin-eater' nursery rhyme. To assert that these utterances carried no communicative intent is perhaps too bold. In the 'Peten-eater' instance there is clearly some shared, affective experience that is being referred to, however ineffectively.

In a critical analysis of the autobiographic writings of autistic people, Happé (1991) refers back to a further case mentioned by Kanner (1946, in Happé, 1991). Kanner described J.S., a three-year-old autistic boy, as responding with the seemingly nonsense word of 'Blum!' whenever questioned as to whether he was being honest. This peculiarity was eventually explained when J.S. (who could read fluently) was able to point to an advert proclaiming 'Blum tells the Truth!' (Happé, 1991: 214). Both Kanner and Happé read this as an example of the autistic boy expressing a private (and therefore ineffectual) association, as opposed to a culturally shared one (such as 'Romeo' standing for 'all lovers', *ibid.*). This analysis seems to overlook the brightness of a fluently, independently-reading three-year-old and the fact that such a child might, on encountering text in the public domain, assume that its associations and referents are culturally shared. Here, then, is perhaps an issue of interpretation of the data, shaped by expectations of the time.

One final issue of note relating to pragmatic 'impairments' is the 'extreme literalness' (Bogdashina, 2005: 181) that has become a popular trope in depictions of autism. Kanner (1943: 220) described Donald T. responding to the request to "*Put that down*" by putting whatever he was holding on the floor. Happé shared the following observation:

Interacting with a bright and verbal autistic child can be an eye-opening experience: One discovers one is talking in metaphors! A request to "*Stick your coat down over there*" is met by a serious request for glue. Ask if she will "*give you a hand,*" and she will answer that she needs to keep both hands and cannot cut one off to give you... (Happé, 1995: 275).

As well as difficulties with idiomatic language, an extension of an extreme literalness is (often) the missing of irony, sarcasm or metaphor: features of language that require a multifaceted interpretation. Beyond this, it also complicates the successful use of politeness

markers (which often involve a grammatical convolution to distance oneself from requests), leading autistic children—and some adults—to appear rude and non-compliant.

However, a tendency towards literal interpretations over pragmatically enriched inferences are not as fundamental to autism as was originally thought. In fact, two studies (Chevallier et al., 2010, and Pijnacker et al., 2009) both found that their autistic participants were just as able to produce scalar inferences as their non-autistic controls. ‘Scalar inferences’ are typical of pragmatic inferences in that ‘the hearer has to go beyond the linguistic meaning in order to recognise what the speaker intended to convey’ (Chevallier et al., 2010: 3). Specifically, ‘the core idea is that the choice of a weaker element from a scale...tends to implicate that, as far as the speaker knows, none of the stronger elements in the scale holds in this instance’ (Carston, 1998: 179), as demonstrated in the examples below:

(7) a. Some of those bees by the hive-entrance are drones

b. *Not all of the bees by the entrance are drones*

(8) a. There are twenty-four species of bumblebee in the UK

b. *There aren't more than twenty-four species of bumblebee in the UK*

In Chevallier et al.’s (2010) study, 22 adolescent autistic males and 22 matched non-autistic controls were shown a series of images whilst an audio-recorded statement describing the images was played to them and they were tasked, simply, with saying whether the statement was true or false. Each statement contained a connective (‘and’ or ‘or’) and in some cases the ‘or’ was contrastively stressed (i.e. “there is a horse OR a goat”, Chevallier et al., 2010: 12). Logically, in the ‘or’ condition, the utterance may be interpreted to mean ‘A or B or A and B’ (there is a horse or a goat or a horse and a goat). However, when contrastive stress is applied to the ‘or’, hearers should be orientated towards an inferentially enriched

interpretation (see: Wilson and Wharton, 2006). In these cases, when shown an image of both a horse AND a goat, participants making scalar inferences should say that the statement is false. To the surprise of the authors, the autistic group performed at the same level as the non-autistic control group. These findings replicated those of an unrelated but contemporaneous study by Pijnacker et al. (2009) which had investigated the phenomenon of scalar inferencing among autistic adults. Together, they challenged the then-prevailing narrative that autistic people universally experience pragmatic impairment.

In addition to the pragmatic issues outlined above, autistic use of prosody has also long been flagged as (pathologically) atypical, or as somehow ‘unusual or odd-sounding’ (McCann and Peppé, 2003), and deserves some attention on account of its role in utterance interpretation. The type of prosody perhaps most commonly associated with autistic speech is one that is monotonous and flat (Hubbard et al. 2017). However, it is also widely, variably reported as possessing an exaggerated, sing-song intonation as well as ‘slow syllable-timed speech, a fast rate of speech or an adopted accent different from that of peers’ (McCann and Peppé, 2003: 327).

Sometimes referred to as *dysprosody* (Stribling et al., 2006: 4), this failure to correctly produce typical prosodic features has often also been read as an indication of ‘lack of access to the meaning inferred by prosodic variation in talk’ (*ibid.*). Prosody is an essential factor for successful communication: ‘the way we say the words we say helps us convey the meanings we intend’ (Wharton, 2012: 567). Modulation of volume, length and pitch of syllables ‘help direct a listener’s attention to the most salient points of a message’ (*ibid.*). We can use tone to express affect, or to indicate our position in relation to the propositions we are expressing (e.g. irony, mocking, incredulity, etc.). An inability to correctly employ or interpret prosody could lead to serious difficulties accessing the pragmatic content of an utterance.

Hubbard and colleagues (2017) set out to examine the affective, rather than the pragmatic or grammatical prosody of autistic adults. Recordings were made of 15 (notably, all male) autistic adults with a mean age of 21 years, saying aloud a set of five ‘emotionally ambiguous phrases (e.g., “I can’t believe this”)’ (Hubbard et al., 2017: 1992), in five emotion contexts: neutral, happy, interested, sad and angry. In order to elicit the relevant affective content, prior to each recording participants were asked to recall a moment in their recent personal

history where they had felt that emotion. The recordings were then played to 52 listeners (of whom 22 were autistic) that were drawn from a pool of undergraduates from the School of Behavioral and Brain Sciences at the University of Texas at Dallas. These listeners were asked to (a) identify the emotion expressed and (b) rate its ‘level of naturalness’ (Hubbard et al., 2017: 1991).

The results add to our knowledge of prosody in autism in an interesting way. In terms of production, in comparison to the control group, the autistic speakers ‘produced phrases with greater intensity, longer durations, and increased pitch range for all emotions except neutral’ (*ibid.*). From this the researchers concluded that a heightened intensity of prosodic features may be attributable to specific emotional contexts. Both typically-developing and autistic listeners were better able to identify the emotions expressed by the autistic group (as opposed to the control), but went on to rate it as sounding less natural. In summary, what this study indicates is that autistic speakers are able to use prosody effectively to convey and read emotional states, but that the increased variability in pitch, velocity, and greater length of utterances marks the speech out as sounding less natural. In an everyday, non-clinical setting, where listeners are not reflecting on their own judgement, it is conceivable that this divergent prosodic delivery will ultimately be perceived as odd, or ‘a little off’.

This fits the pattern of research—of which a large portion is emanating from the Development of Social Cognition Lab at University of Texas at Dallas, led by Noah Sasson—that demonstrates the ways in which the negative thin-slice judgments of non-autistic people impact on cross-neurological communication (e.g. Sasson et al., 2017, discussed in Chapter X, and Morrison et al., 2019a). What it says, exactly, about autistic prosody remains a little unclear. As with all of these studies, a significant limitation is the fact that the raters were all undergraduate students at the university which, at the time, had the highest number of autistic student enrolments in the USA (Morrison et al., 2019a). A population of young, academically curious individuals, accustomed to circulating with autistic peers is not particularly representative of a wider public. Furthermore, a variation in expressivity of affect between autistic and typically-developing individuals may reflect an integral difference in the experiencing of the emotion. As we know, autistic people often possess hyper- or hypo-sensitivity to sensory stimuli. It could be that for one autistic person to register an emotion as significant enough to warrant expressing—remember: they were

drawing on memories of having experienced the target emotion—it would need to already be intense. For another, it may be that all or some emotions are experienced at a heightened level in the first place. As far as I can tell, this was not controlled for, and may prove an interesting further area of research.

One outstanding question is where these evident differences in autistic communication come from. In the introduction to their chapter on language and communication in autism, Tager-Flusberg, Paul and Lord (2005: 335) observe that:

...evidence from numerous sources suggests that the social and linguistic environments of autistic children, most of whom have active, loving, and determined parents and teachers, can be quite different from those of other children.

Although not attributable to specific genetic variants, autism has still been found to have some genetic component (Fletcher-Watson and Happé, 2019). Children may be born into families with parents or siblings who also have autistic characteristics. In that case, it is plausible that an ‘autistic sociality’ (Bertilsdotter-Rosqvist, 2019 and Ochs and Solomon, 2010, and below) could, as with normative social behaviour, have some learnt or environmental aspect. In other words, in some cases there could be a familial social practice that has developed to incorporate an autistic ‘form of life’ (Chapman, 2019a, developing a Wittgensteinian account of autism: see Chapter F for detail), rather than a set of inherited ‘deficits’.

3. New turn: the intersubjectivity framework

Over the last two decades, social science research into autistic sociality and communication has begun to turn its gaze towards *intersubjectivity*. Intersubjectivity is the phenomenological position that humans live beyond the bounds of our perceptual fields and at an embodied level are consciously engaged with each other (see Gillespie, 2011). It is the view that as (embodied) social agents, we share in some degree of a ‘co-conception or co-

orientation to the world' (Schegloff, 1992: 1296). Functioning as a counter to a solipsistic view whereby the individual mind has primacy, intersubjectivity emphasises the inter-relational aspect of selves and selfhood. The application of an intersubjective approach to autism research, then, is doubly radical, in that it moves away not only from a view that the autistic mind is deficient (see empirical work investigating the DEP, Chapter X), but also from the previously pervasive view that autistic individuals exist within a chronically egocentric bubble, disengaged from those around them.

3.1 In Linguistic Anthropology

A special issue of *Ethos*, the journal of the Society for Psychological Anthropology, was published in 2010 entitled 'Autism: rethinking the possibilities'. This edition featured interdisciplinary ethnographic papers that 'reimagine[d] autism from a phenomenological, rather than a biomedical, point of view' (Solomon and Bagatell, 2010: 2), embracing the complexity of autism and placing the personal experience of those who live with it (i.e. the broader familial and support networks as well as the autistic individuals themselves) at the centre of the research.

In that special issue, Sirota (2010: 94) reports on her study using 'naturalistic ethnographic data to augment conceptions regarding the socio-communicative lifeworlds of children with autism spectrum conditions [...] and to situate an understanding of human sociality as lodged within interactive, communicative processes'. A corpus of naturalistic data comprising the daily interactions of autistic children at home with their families is treated to a sensitive analysis that, ultimately, presents them as situated, interactive agents within their familiar worlds. In their contribution to the edition, Ochs and Solomon (2010) present data from their decade-long linguistic anthropological research into the socio-communicative behaviours of autistic children. Detailing what they identify as an 'autistic sociality', they outline a 'domain model' of sociality 'in which domains of orderly social coordination flourish when certain situational conditions are observed' (Ochs and Solomon, 2010: 69). In other words, the so-called impairments may vanish or diminish in certain circumstances (see Chapter F for further examination of Ochs and Solomon's autistic sociality).

Most relevant to this thesis is the paper by Sterponi and Fasulo (2010). Through a case study analysis of one autistic child (aged 5 years and 10 months) in dialogue with his caregivers, they observe that autism, in many ways, signifies the ‘boundaries of what we regard as human sociability and communication’ (Sterponi and Fasulo, 2010: 117). The authors argue that this binary distinction between, at the one end, functional, normative communicative ability and, at the other, deficiency or impairment:

fails to recognize that mundane communicative interaction is punctuated by departures from normativity and that those departures not only do not break down communication but also are often the measure of felicitous interpersonal exchanges (Sterponi and Fasulo, 2010: 117).

‘Normal’ communicative performance is not so stable a construct as we might perhaps require it to be if it is to be used as benchmark against which the ‘abnormal’ is to be measured. With this in mind, Sterponi and Fasulo (2010) sought to investigate the atypical language use of this autistic child (here called ‘Aaron’), beginning with the premise of asking ‘what is this utterance doing?’ instead of automatically problematising it.

Over the duration of one month, 16 hours of video footage documenting spontaneous talk-in-interaction were analysed within a conversation analysis framework, with a primary emphasis on sequential turns. In their analysis, Sterponi and Fasulo rely heavily on the concept of *progressivity*, drawing on Schegloff’s (1992) development of the conversation analysis (CA) notion of common knowledge as procedurally generated. For Schegloff, the puzzle of how intersubjectivity could be achieved seemed best explained by the scaffolding of ‘a set of practices by which actions and stances could be composed in a fashion which displayed grounding in, and orientation to, “knowledge held in common” ’ (1992: 1298). Mutual understanding could thus be seen, rather than based on seemingly inexplicable and nebulous ‘commonsense knowledge’ (*ibid.*), as to be in a constant process of co-creation between interlocutors, driven by sequential turn-taking. Progressivity—for Sterponi and Fasulo, the ability for interlocutors to ‘go on’ with one another—is contingent on this procedural intersubjectivity:

The procedural infrastructure of interaction offers a host of resources that interlocutors routinely employ to display and evaluate understanding. In other words, talk in interaction is organized in such a way that from the way turns are tied to one another, interlocutors can implicitly and continuously assess their reciprocal alignment, and go on with next move if they detect no (or no significant) mismatch. Progressivity, namely the unfolding of the interaction, is thus ensured by its own functioning (Sterponi and Fasulo, 2010: 119).

Focusing their attention on progressivity within the transcribed conversations revealed some communicative competencies on the part of the autistic child that may previously have gone unnoticed. Where Aaron was lacking the functional communicative resources common to typically-developing children of his age (such as protests, assessments, narrations, etc.), he was able to apply the communicative moves he had mastery over in such a way so as to ‘propel sequence progressivity’ (Sterponi and Fasulo, 2010: 120). In several instances, for example, when faced with a parental request for a specific behaviour or response, Aaron replies with ‘or else?’. With his limited verbal range, this becomes something of a common move and on the surface may appear a rote response or stereotypy. It is, in fact, rather a clever move. As the authors observe, it neither directly refuses nor complies with the request, but ‘shifts discourse to a hypothetical plane... suspending the behavioural demands and launching a new language game’ (Sterponi and Fasulo, 2010: 124). It functions, here, in a similar way as Bartleby the Scrivener’s ‘*I would prefer not to*’ (Melville, 1961). In these interactions Aaron gains control, and incites his parents to keep the conversation running (rather than, say, end at the fulfilled directive).

What is most interesting about the above case study are the excerpts shared where progressivity extends over lengthy conversations, held together by linguistic playfulness. In one, where Aaron and his mum sit on his bed and joke about a bug that has entered the room, ‘language is set free and allowed to run along the very edges of meaning’ (Sterponi and Fasulo, 2010: 135). Turns take a sensorial, phatic lead rather than a semantic one, in the sense that repetitions, alliterations and prosodic parallelisms drive each next utterance, at times parodying a typical sequence. The sequence culminates in ‘pure speech and sound play, a vocal, rhythmical duet of consonant variation’ around the word ‘bug’ (Sterponi and

Fasulo, 2010: 134). Like two jazz musicians improvising together, a tight, intersubjective attunement is evident. In these moments, Aaron's interlocutors allow their grip on expected responses to loosen, and take the leap of faith required to take his moves as they come, trusting in 'Aaron's capacity to participate in the exchange'. It is not so much that his mother does not expect Aaron's responses to be relevant, rather that she is allowing some cognitive elasticity in how she accounts for Aaron's interpretation of what is relevant for him.

While this study forges new territory in the analysis of autistic language use it is worth remembering that it is, only, a case study of one. Moreover, all the conversations transcribed are necessarily asymmetric. The interlocutors are significantly unbalanced in terms of age, developmental and cognitive ability, social skills, encyclopaedic knowledge and situational power. This fact does not undermine the results or interpretations but, rather, throws down the gauntlet for how analysis of adult autistic language use might be analysed.

Sterponi builds upon the methodological implications of this in future papers (see Sterponi and de Kirby, 2016 and Section 3.2.1 of Chapter M for more detail). Here Sterponi and de Kirby (2016: 394) describe how, using what they term an ethnographic 'discourse analytic approach', speech can sometimes conceal 'competencies and interactional processes that are largely invisible in mainstream research'. This blended approach takes from 'discourse analysis proper, interactional linguistics, linguistic anthropology and [...] conversation analysis' (*ibid.*), most importantly with an emphasis on an utterance's interactional accomplishment. In applying this approach to a small corpus of spontaneously occurring conversational data, featuring three six-year-old autistic children and members of their immediate family, Sterponi and de Kirby found that some of key characteristics of 'impaired' autistic language use—such as pronoun atypicality, echolalia and pragmatically atypical utterances—seemed to have potentially alternative explanations.

For example, instances of echolalia under this nuanced analysis were often revealed to involve a discrete functional purpose: in one case it served as a distraction tactic to divert a parent interlocutor from a conversational direction that the child did not wish to engage with. In their transcribed conversations they also saw that echolalia was functioning, at times 'as [a] mechanism to experience the other, or to access the experience of the other' (2016: 402), or in other words, it could be interpreted as a form of perspective-taking.

In a review of language and speech studies in autism, Gernsbacher, Morso and Grace (2016) remind us that echolalia is common to all children during their language development and argue that it can have ‘communicative’ (2016: 417) and ‘generative’ (2016: 418) functions. They demonstrate this in the case of Bud, an autistic boy not yet at the stage where he was able to use original two-word phrases

For example, Bud, an autistic child who was quite fond of the Teletubbies television show, initially echoed the sentence, “One day in Teletubbyland, all of the Teletubbies were very busy when suddenly a big rain cloud appeared.” Weeks later, using mitigated echolalia, the child said, “One day in Bud’s house, Mama and Bud were very busy when suddenly Daddy appeared,” to express the construct of his father returning home (Gernsbacher, Morson, and Grace, 2016: 417-418).

As ever, what seems to matter most is the attitude of the analyst. Are we looking for criteria that will confirm a lack of subjectivity and an impaired ability to communicate, or are we open to a speaker functioning in a way that does not fit the norm? Researchers and scientists are all of our own time though, and it is only because of the work of those who have gone before that we have something on which to reflect with our hindsight.

De Jaegher (2013) offers one further angle on the function of echolalia in an autistic child’s speech in a paper outlining her enactive account of autism and ‘sense-making’ (see Chapter F for a summary). She first recounts an interaction involving echolalia reported on in a study undertaken by Stribling and colleagues (2006). The authors analyse three cases where their autistic child speaker, ‘Lenny’, inserts ‘spelling assertions’ (Stribling et al., 2006: 9, 14)—e.g. <p:lease ‘as go:t (.) an: A: IIN IT>—into a context where spelling appears irrelevant. Taking into account the interactional context (Lenny was playing with a robot at the time) and the prosodic features (these utterances were delivered at a yelling pitch that diverged from the surrounding contributions), the authors had concluded that these spelling assertions were functioning as protests against losing control of the toy, and an attempt to regain it. In her complimentary analysis, de Jaegher wonders whether the echolalia may also bear an intrinsic meaning:

From the enactive point of view, in which a cognizer self-maintains and self-organizes, it can be proposed that the boy is self-affirming his place in an interaction in which he feels that something is taken away from him, by uttering knowledge that he has. These utterances could be a way of maintaining individual autonomy in an interactional situation (de Jaegher, 2013: 13).

As with echolalia, Gernsbacher, Morson, and Grace (2016: 416) outline in their review how atypical pronoun use is not unique to autism, and that where it does occur, any significant differences between autistic and non-autistic difficulties are dissolved when careful matching of the children's language comprehension skills is undertaken. They highlight how, by virtue of the original lens under which autism was identified and scrutinised being a psychoanalytic one, a bias was established to label characteristics immediately as deficits.

Sterponi and de Kirby (2016) found similarly alternative interpretations for the reversals of first- and third-person pronouns. When viewed in context, they often reflected an adoption of the 'baby-talk' framework initiated by their interlocutor (i.e. "give mummy a cuddle..."), rather than (as is usually assumed) a fundamental confusion of self and other (see: Gernsbacher, Morson, and Grace, 2016). Baby talk, 'with its heightened pitch, exaggerated intonation, stretched out sounds, reduplications, endearments and infantilising lexicon' (Ochs 2012:152) is the kind of cooing manner that can be heard spoken anywhere adults are speaking with young infants (or those they believe to have a child-like mentality). It is auditorily soothing, and as such has potential to 'immerse interlocutors in an affective zone of intense intimacy' (*ibid.*). However, as Ochs and Solomon (2010: 85) observe, the 'heightened affect and slowed tempo' may prove unwittingly distracting for autistic children. The following section discusses the sensorial nature of language and how that may be perceived differently in autism.

3.1.1 Language as sensory experience

I'm sitting in a GP surgery's consulting room, late summer, in a derelict seaside town. The air conditioning whirs persistently from beyond the

articulated beige leather couch and the roll of blue paper towel mounted on the wall beside it. Behind me a stainless steel trolley of phlebotomy equipment insists that the knees of my crossed legs bump up against the desk I'm sat beside. The back of my neck is cold.

We're going for "the jackpot".

We have 20 minutes left of today's Cognitive Behavioural Therapy session – I'm here to try and get myself through this PhD mess; to not lose my grip of it, my grip of myself – and out comes a new, over-photocopied form. We hurry through to the third column: the one where you write down-
"evidence you have for your core belief".

My therapist is from the Baltic states and says the word "belief" with a 'dark L'. He lands heavily on the 'L', sounding it out the way you would pronounce the 'L' at the end of 'full'. I like it. It loops round in my mind on repeat,

BuLLLief - BuLLLLLief - BuLLLLLief

BuLLLief - BuLLLLLief - BuLLLLLief

BuLLLief -

"...Gemma?"

From as far back as Kanner's (1943) early case studies, an autistic delight in the *sound* of words, as opposed to their meaning, has been noted. Echolalic repetitions and perseverations pepper the sometimes limited speech of the autistic children under observation, as was described in the case of Donald T.:

He seemed to have much pleasure in ejaculating words or phrases, such as “Chrysanthemum”; “dahlia, dahlia, dahlia”; “Business”; “Trumpet vine”... (Kanner, 1943: 219).

[*Chrysanthemum; dahlia, dahlia, dahlia; business; trumpet vine*. Trumpet vine! Say those words aloud. Elongate them. Shout them, if you dare! Roll the ‘R’s. It’s impossible not to feel like the tongue is breaking the greatest taboo: speaking nonsense words for the sheer alchemical pleasure of sound and articulation combined. In the right circumstances, it may even verge on the ecstatic.]

An additional, common thread that runs through these more phenomenologically grounded approaches to autistic language use is the acknowledgment of an—at times—increased attunement to the sensorial aspects of words and phrases. In a recent commentary, Sterponi (2018) observes the following:

Autistic engagement with language is often experientially attuned to sound and form, in excess of semantic content, thereby revealing of dimensions of significance that tend to be overlooked in autism research. Non-referential signification refers to and affirms the possibility of linguistic expressions to be meaningful without denoting. Conjuring up realities through referential operations is undoubtedly a chief semiotic capacity of language. There is also semiotic potential, however, in the musicality of phrases and their articulatory texture—as they are experienced in ear and in mouth. Autistic modes of engagement with language subvert the referential hegemony to uncover additional dimensions of significance and experience of language (Sterponi, 2018: 177).

Words and phrases clearly possess a sensory dimension, yet it is rare amid the flux of everyday conversation that most speakers stop to pay attention to the way their mouth feels when they sound out a word; to the resonance it generates in their chest, or back, or throat;

the way it tickles the ear. Semantic denotations and inference interpretations dominate limited processing capacities. A simple delighting in the rhythm and music of language is left, in most cases, for the realm of poetry or song.

Ochs (2012: 142) argues for an increased consideration of the additional qualities of language beyond that which, she argues, receives the most attention: the symbolic (i.e. its capacity to represent facts of the objective world and ‘public cultural meanings’, but ‘with no resemblance to the represented’). As well as its indexical and performative functions, for Ochs, language use is also a (phenomenological) *mode of experiencing*. As demonstration of her argument, Ochs provides the transcript of an interaction between ‘Adam’, an 11-year-old autistic boy, and his mother in which Adam recounts ‘with great relish’ (2012: 150) and in great detail the exact times that the school bell rings throughout the day.

The use of a transcript featuring an autistic interlocutor as an exemplar for what the author is suggesting might be a universally human mode of experiencing language runs counter to the long-standing narrative that autistic people are impaired in their language use. Ochs explains her choice as being on account of the ‘experiential quality of language [being] especially salient in the discourse of children diagnosed with autism spectrum disorder’ (Ochs, 2012: 150). In their conversation, Adam speaks enthusiastically about what he considers to be the ‘craziness’ of the bell times (08:31; 09:28...), whipping up his mother into his excitement with punctuating claps and laughter. Under Ochs’ analysis, the emphatic delivery (it is annotated in the transcripts as being breathy, full of affect and highly marked by tonal stress) and repetitiveness ‘transports him and his mother inside the temporal domain of Mrs Brown’s first-period class’ (Ochs, 2012: 151). As well as its ability to conjure a reality, there is an evident pleasure in the use of language itself, in manner reminiscent of autistic ‘stimming’:

Like rocking back and forth and spinning, the voiced repetitions, sequences, and contrasts of the class times are co-experienced as emergent sources of pleasure and shared laughter(Ochs, 2012:151).

This recognition of a heightened autistic engagement with the sensorial element of language seems to accord with a *gestalt* perception that may be typical of autists (where seemingly insignificant sensory percepts are not filtered out, see: Bogdashina, 2005 and Walker, 2019: 41- 43) and the often heightened sensory experiencing self-reported by autistic people (see Chapter X, Section 1.2.2 and Section 2). Non-communicative echolalia may be seen in this light: as ‘auditory-tactile / sensory-linguistic toys’ that may be repeated as a source of self-soothing or self-enjoyment, in a not wholly dissimilar manner to meditation mantras (Bogdashina 2005: 177).

Kugler (2002), a scholar of Jungian theories of archetypes and the subconscious, draws out some observations relating to the role of the sonic form of language, based on Jung’s early work on word association.²⁸ In the early 20th century, Jung worked at the Burghölzli Klinik in Zürich, under the supervision of Eugen Bleuler.²⁹ One of Jung’s main research foci was to test some of Freud’s theories of the origins of psychopathology and in order to do this he conducted a number of experiments that often involved word association tests, which he administered to participants who were under states of increasing amounts of induced fatigue. In addition to the findings tied to the original research aims, Jung also discovered that as fatigue increased, a participant’s semantic associations would reduce and be replaced by phonetic word associations:

The more tired the subject became, the less his associations were influenced by the *meaning* of the stimulus word and the more the subject tended to associate words according to a similarity in *sound* (Kugler, 2002: 26).

²⁸ Though it may not be within the scope of this thesis to dwell on such connections, it is worth making passing note that Jung’s assertion—that the *imago* is not a copy of the reality but the source of our sense of it; that everyday reality is a creation of the psyche—is not a million miles away from a much more contemporary predictive processing account of experienced reality.

²⁹ Bleuler, coincidentally, coined the term ‘autism’ during his work in the Klinik on childhood schizophrenia.

The results of this work distinguished between the effects of muscular tiredness from those of a kind of mental fatigue. In a battery of two hundred word associations they found that after the first hundred, participants would become bored, pay less attention and demonstrate a significant decrease in the semantic associations made alongside an increase in the phonetic ones. A similar result was seen in those participants who were tested immediately after waking from some physically restorative sleep, yet still being cognitively drowsy. The conclusion they were able to draw from this was that as attention decreases so too does the inhibition of the first order, subconscious phonetic associations.

This knowledge may help us move a little closer to understanding why it is that in autistic language use, the sensorial, phonetic attributes of words can carry seemingly heightened salience. The Burghölzli Klinik research suggested that the centrally salient content of ‘imagos’ (i.e., here, mental representations) are its phonetic components: it is these that are most deeply embedded in our subconscious. Increased cognitive effort, in the form of attention, is required to process the next layer of semantic associations. It is possible that autistic children, with their divergent attentional patterns (many, if not all, of whom are arguably monotropic individuals, see: Chapter X, Section 1.2.2) have sufficient intensity of attention directed elsewhere (background noise; a weird feeling in my toe; Oh! a birdy!...) so as to not be directed away from the *sound* of the words by the *meaning*-content? Reading about these word association tests I’m reminded of the first young autistic boy mentioned above, Aaron, and his gambolling with his mother on the bed, and the alliterative, assonated word-play they engage in together.

bug / hug / bed / bug / bite / bit / bug bite / bug blanket / bad bed...

3.2 In the Social Sciences

In very recent years within the social sciences, there has been a growing body of intersubjectively-grounded empirical work that lends its support to the DEP (see: Brewer et al., 2016; Crompton, Fletcher-Watson and Ropar, 2019a, 2019b; Edey et al., 2016; Heasman and Gillespie, 2017, 2019; Hubbard et al., 2017; Morrison et al., 2019a; Sasson et al., 2017;

Sheppard et al., 2015). While those that have focused more on addressing the theory of the DEP were discussed in Chapter X (Section 1.2.3), this subsection focuses on those that concentrate on autistic communication.

One such study, by Crompton, Fletcher-Watson and Ropar (2019b), draws on the common beliefs that autism is characterised by social communication deficits; hypothesising that if this were to be true, an information transfer, a task contingent on successful social communication, should be significantly impaired when autistic people are providing the information. In order to test this theory, they devised a task involving a diffusion chain³⁰ where a story told to an original participant is recounted to each subsequent participant by the previous one, for eight iterations. The activity was designed so that chains would involve (1) pairs of autistic participants; (2) non-autistic pairs or (3) mixed (alternating) autistic and non-autistic pairs. The story told to the first participant in the diffusion chain by the researcher involved 30 distinct points, and ‘followed a bear on a surreal adventure’ (Crompton et al., 2019b: 8).

They found, as the DEP might predict, that the detail retention across autistic chains did not differ from that of the non-autistic chains, but that it *did* decline more steeply in the cross-neurological, mixed chains. In other words, communication flowed more efficaciously within matched neurotype pairings. This degradation in the quality of information transfer in mixed pairs also ran ‘in parallel with a reduction in rapport’ (Crompton et al., 2019b: 2), that had been measured on leaving the room on a ‘100-point scale with five dimensions: ease, enjoyment, success, friendliness, and awkwardness’ (Crompton et al., 2019b: 8).

As the authors acknowledge, the sample size (N=72) is not really large enough to lend itself to generalised conclusions, but the results of this study appear to support the idea that communication across neurotypes is impaired, whereas autistic communication, per se, is not. This challenges the longstanding premise that autism is a condition that intrinsically impairs socio-communicative abilities.

³⁰ Diffusion chains are common conversational games, particularly for children. The most well-known example is Telephone.

Heasman and Gillespie (2019) sought to investigate the manner in which a group of wholly autistic people may interact with one another: a specifically autistic intersubjectivity. In particular, they were interested in how autistic people build social understanding given that although:

autistic people are neurologically divergent [...] methods for investigating autistic sociality tend to assume neurotypical definitions of being social (Heasman and Gillespie, 2019: 910).

The researchers video-recorded the interactions of 30 adult autistic participants across 20 sessions (with 10 participants taking part in multiple sessions), in groups of between two and five, engaged in playing video games together on an Xbox One, at a local autism support charity.

The turns within the transcribed interactions were scored according to three criteria; *affect* (i.e. the harmony of displayed emotion between turns; *symmetry* (how assertive or submissive a turn was in relation to the previous turn); and *coherence* (the extent to which a turn ‘is part of the sequential organisation of interaction’, with a focus on topicality: Heasman and Gillespie, 2019: 912). For each criterion, turns were scored along three points; (-1), representing ‘fragmentation with prior turn’; (0), indicating ‘turns that were ambiguous, unclear, or failed to meet any explicit criteria’; and (+1), ‘showing alignment’ with a prior turn (*ibid.*). Scores were calculated to a (moving) average to reduce data noise, and plotted along a line graph with the X-axis representing turn number (and therefore, also, time).

The authors were able to identify two singular features of neurodivergent (autistic) intersubjectivity. The first was ‘a generous assumption of common ground that, when understood, led to rapid rapport, and, when not understood, resulted in potentially disruptive utterance’ and the second, ‘a low demand for coordination that ameliorated many challenges associated with disruptive turns’ (Heasman and Gillespie, 2019: 910).

What Heasman and Gillespie had noticed, in the first instance, was that it was common for speakers to initiate ‘sudden and specific topic shifts’ (Heasman and Gillespie, 2019: 915),

manifesting in some cases in moving into the use of a voice borrowed from a fictional character: sometimes from the game that was being played, but other times from a far wider repertoire of film and television. These digressions into another voice were not explained, not was their comprehension or recognition checked at the time. In their analysis the authors take the stance that ‘vocalising such perspectives assumes to some degree a level of common ground’ (*ibid.*), and it is partially from this position that they are able to conclude that there is a generosity in the assumptions of common ground made by the interlocutors. This may be true, but in some ways these repetitious fragments are an echolalia of sorts. While it may be that the players are assuming access to a shared repertoire, it is also possible that these switches are unguarded (un-‘masked’) autistic auditory-stim behaviours with the intention being more to play, rather than to convey.

In line with a potential linguistic playfulness in the autistic interactions, the authors note that while generous assumptions of common ground could sometimes fracture coherence, at ‘other times it could spark creative, productive and affective passages of dialogue’ (Heasman and Gillespie, 2019: 915.). Moreover, the lower demand for coordination ‘ameliorated many challenges associated with disruptive turns’ (Heasman and Gillespie, 2019: 910). This pattern of communicating, with its sudden leaps and turns, intrusions, and tolerance of disjunctures may reflect a lifetime experience of interacting as a neurological minority, unable to easily predict what is coming next where salience is infrequently shared.

In a different study by Crompton, Fletcher-Watson and Ropar (2019a), autistic adults were asked, through semi-structured interviews, to describe the experiences of the relationships they have with both autistic and non-autistic family and friends. In addition to reporting a tendency towards practical and affective difficulties with cross-neurological interactions, respondents described ‘feelings of comfort and ease’ (Crompton, Fletcher-Watson and Ropar 2019a: 8) during the time spent with autistic companions.

Many stated that communication styles were similar between autistic people, and this made interactions more comfortable, that it was easier to follow conversations and understand what people mean:

“With autistic people, I have a much better idea of what people are doing, what they mean, and picking up on things” - Participant 2

Participants noted that there is flexibility with their autistic friends and family about what constitutes a “good” interaction, and that there is a shared understanding that if there is a problem during an interaction that there will be understanding from their autistic family and friends (*ibid.*).

It would seem that the results from Heasman and Gillespie’s study supports this self-reporting of a more generous, arguably less constrained form of interacting that can emerge between autistic interlocutors.

The low demand for coordination that Heasman and Gillespie found is reminiscent of something mentioned by Ochs and Solomon (2005), reporting on their work with a corpus of autistic child language use, collected for the Ethnography of Autism project. They noted that the autistic child participants in the project often made contributions to an ongoing conversation that did not coordinate entirely:

Neither wholly irrelevant nor wholly relevant, such... structures are what we call *proximally relevant* to the social practice underway (Ochs and Solomon, 2005: 143).

The authors found that the autistic children often responded to opinions, or emotional or ironic comments from their adult interlocutors in two ways: either by making their interactional contribution ‘locally relevant to what was just said or what just transpired, but not to the more extensive concern or enterprise under consideration’, or by shifting ‘the focus away from personal states and situations to topically relevant impersonal, objective cultural knowledge’ (Ochs and Solomon, 2005: 158). In this way the children were participating in the back-and-forth of talk-in-interaction, but through contributions that are not directly on-topic. This ‘proximal relevance’ may well be explainable by a lower autistic requirement for tight coordination and conversational coherence. Alternatively, it could be that the autistic adults in Heasman and Gillespie’s (2019) study have developed or adopted a lower demand for coordination based on their lived experience of repeatedly engaging in conversations with predominantly non-autistic people whose patterns of relevance do not match their own,

and therefore regularly do not meet an expectation of perfect relevance. In other words, perhaps they were more accustomed to conversation moving in an unpredictable direction.

4. Relevance theory and autistic language use

The primary argument of this thesis is that relevance theory, and in particular its central concept of mutual manifestness (see Section 4.1, below), may function as a useful alternative lens through which to analyse and interpret the pragmatic difficulties traditionally ascribed to a ToM deficit in autism.

At first glance this idea may seem flawed. Intention recognition is a fundamental aspect of the relevance theoretic account of utterance interpretation. Roughly, understanding of an utterance occurs when a listener makes correct inferences about a speaker's intended meaning, based on a relevance-seeking process. As such, relevance theory has largely been used to explain the cognitive mechanisms of (both successful and unsuccessful) utterance interpretation in typically functioning communicators with assumedly intact ToM abilities.

However relevance theory has also been used on occasion as a means of exploring pragmatic impairment (e.g Happé, 1991, 1993, 1995; Leinonen and Kerbel, 1999; Leinonen and Ryder, 2008; Loukusa et al., 2007; Papp, 2006; Wearing, 2010). Most notable among the handful of instances where relevance theory has been applied specifically to autistic language use, is Happé (1991, 1993, 1995), where she used relevance theory to make a number of predictions about the communicative (and specifically, the pragmatic) competence of autistic individuals.

Based on the then prevalent belief that autistic people had limited to no ToM (as discussed above in Chapter X), a relevance theoretic account would seem to predict that they would find non-literal use of language inaccessible:

‘[The] inability to recognize the speaker's thought behind the utterance, and that thought's more or less loose relation to the utterance, has very severe implications.

It means that such autistic people are *never* communicating like normal people' (Happé, 1993: 106).

As outlined in Chapter Z, relevance theory posits that a speaker engaging in ostensive-inferential communication will craft their utterances according to two simultaneous intentions: (1) the informative intention—to make set of assumptions $\{I\}$ mutually manifest); and (2) the communicative intention—to make the hearer aware of the intention to make set of assumptions $\{I\}$ mutually manifest. Happé's (1993) hypothesis was that, for those autistic people lacking the ability to meta-represent a speaker's intention to inform, recognition of ostensive behaviour (among other non-ostensive behaviours) should be impaired. For those autists who were able to pass first-order ToM tests but not second-order tests, the informative intention should be evident but the second-order communicative intention, not so. In particular, these autistic people should begin to struggle to correctly interpret communication in those cases where 'the speaker's attitude must be taken into account in modifying the literal meaning of the utterance' (Happé, 1993: 103).

In order to test this theory, comprehension tasks were devised to measure understanding of (1) similes, which are understandable on a purely literal level; (2) metaphor, the comprehension of which is contingent on a first order recognition of speaker intention; and (3) irony, which, according to a relevance theoretic echoic theory of irony requires second order meta-representation. Eighteen mostly teenage autistic participants were divided into three groups based on their performance in a prior battery of ToM tests: those considered to have no ToM, those with first order, and those with second order ToM. And the findings did indeed seem to support the predictions. The participants with no ToM were able to interpret similes but not metaphors, while those with second-order ToM skills outperformed the first-order group on the irony comprehension task. Both first- and second-order ToM participant groups were able to interpret metaphor.

Whilst these results were supportive of a relevance theoretic account of ostensive-inferential language use and an echoic theory of irony, they could not really explain why some autistic people possess first- or second-order ToM abilities and others might not. Furthermore, a subsequent, similar study by Norbury (2005) was not able to replicate the same results in terms of metaphor comprehension. In Norbury's study, although the first-order group did

perform slightly better at the metaphor task than the no-ToM group, the difference was not statistically significant and ‘both no- and first-order ToM groups were impaired relative to those with second-order ToM skills’ (Norbury, 2005: 395) at metaphor interpretation. Moreover, whereas in Happe’s research only the no-ToM group had found metaphor more difficult than simile, in Norbury’s, all participants—including controls—demonstrated a greater difficulty in interpreting metaphors than similes. One conclusion of this later study was that ‘broad semantic knowledge... predicted a significant amount of variance in metaphor comprehension, whereas ToM understanding and severity of autistic symptoms did not (Norbury, 2005: 394).

Finally, in her 1995 paper, Happé reminds the reader that there are some instances of communication where the second, communicative intention is essential, such as in phatic communication, and predicts that this is where the ‘quintessential case of failure of communication due to lack of theory of mind’ ought to occur (1995: 281). In thinking about this I am reminded of Aaron (in 3.1, above) and his emotionally-rich, engaged phatic communication with his mother, that, while on surface appears meaningless, serves the function of consolidating rapport. The purpose of phatic communication is to express positive affect and to progress smooth interaction: it has a specifically social function. It may be that rather than autistic individuals missing or not engaging with the second, communicative intention, the means of expressing affect and engaging socially are mutually mismatched.

Another study using the principles of relevance theory in its design was that of Loukusa and colleagues (2007), which tested the ability of (Finnish) autistic children to apply context to utterance interpretation. They found that while the autistic participants of both age groups (7-9 years of age and 10-12) did demonstrate difficulties in processing the contextual information provided, they were still able to answer the full range of pragmatic question types. The authors summarised that ‘the performance of these children indicated an inefficiency, but not an inability in context use in comprehension’ (Loukusa et al. 2007: 1056), while also noting that the ability to draw on context improved between the two autistic age groups.

What unites the relevance theoretic studies mentioned above, as well as other studies that have applied relevance theory to autistic language use (e.g., Wearing, 2010), is the

foundational premise that autistic people have significantly impaired ToM abilities. This starting point has an effect on the interpretation of the data. Significant, too, is that they have all involved child or adolescent participants, as has tended to be the norm in autism and autistic language use research (see Nicolaïdis et al., 2019). As was observed in Loukusa and colleagues' (2007) study, the ToM abilities of autistic children (as measured within a normative framework) develop at perhaps a slower speed than the general population, and in a different order (see Peterson and Wellman, 2018, and Chapter X). Learning and finessing the skills required to anticipate relevance of another that, crucially, does not match your own (more below, and see Chapter X, Section 2), in all probability takes time and significant cognitive effort. An investigation into how (mutual) pragmatic understanding is or isn't achieved by autistic adults, with experience of interacting in the social world, may well show different results. In testing the language use skills of these participants through multiple choice answer formats, too (e.g., Happé, 1993; Norbury, 2005), something of natural, spontaneous, context-bound communication is lost, making these results less validly applicable to real-life talk in interaction. I am inclined to agree with the following assertion:

naturally occurring interaction should be privileged as a source of data—particularly when research questions explicitly reference social interaction, as is often the case in research on autism (Sterponi and Fasulo, 2016: 395).

Given the body of recent research that is beginning to demonstrate the ways in which ToM difficulties can run both ways between autistic and non-autistic communicators, a relevance theoretic account of autistic pragmatic 'impairments' may seem redundant. If, as the DEP has it, mindreading may involve a failure in both directions within cross-neurological communication, and if autistic people are not as inherently mindblind as was first thought, then explanations based on mono-directional ToM impairments are clearly not satisfactory. Mutual manifestness may offer an explanation for the reduced mutual understanding between autistic and non-autistic people that avoids the assumption that such breakdowns are caused by an inherent autistic impairment.

4.1. Mutual manifestness as an explanatory tool

The notion of mutual manifestness is central to relevance theory. In this ostensive-inferential model of utterance interpretation, mutual manifestness describes the shared spaces between two minds: the intersection of two distinct cognitive environments.

Every individual is understood to possess their own ‘cognitive environment’, comprising all facts and assumptions both actually and *potentially* available to them. This, then, includes all encyclopaedic knowledge, however presently or dimly accessible, and all permutations of that knowledge given the right context. For example, it is unlikely that a person would have it stored, representationally, that the Queen of England has never ridden a whale: this is a thought that most people would never have the need to entertain. However, should the topic arise (over dinner, perhaps after a glass of wine or two) an individual may well be able to generate this assumption based on their available knowledge and assumptions about the typical activities of British royalty and the wieldiness of whales. Within relevance theory, facts and assumptions that are within potential reach—reliant as they are on the combination of individual knowledge, cognitive abilities and physical environment—are, considered to be ‘manifest’.

It is clearly not possible for the cognitive environments of two individuals to map completely snugly onto one another. The facts and assumptions that are available at any given moment to even two of the closest twin siblings, who share DNA and matching physical environments, will differ on account of their fluctuating cognitive abilities and different subjective experiences of the world. As Sperber and Wilson put it:

Perceptual abilities vary in effectiveness from one individual to another. Inferential abilities also vary, and not just in effectiveness. People speak different languages, they have mastered different concepts; as a result, they can construct different representations and make different inferences (Sperber and Wilson, 1986: 38).

However, some *portions* of two cognitive environments will at times most certainly overlap. Shared physical environments, shared autobiographical knowledge and shared worldly

knowledge all contribute to what can be termed a ‘mutual cognitive environment.’ Where it is evident to both parties that certain facts or assumptions are shared, these facts and assumptions, which form the mutual cognitive environment, are said to be ‘mutually manifest’. I recognise that other members of the local beekeeping club I attend will likely have manifest to them assumptions about pollen flow in our geographical region, at a particular time of year, and also that ivy blossom is a valuable source of nectar for honeybees as autumn unfolds in late September. Whereas my sister, albeit living in the same city as I, may not have these assumptions mutually manifest.

Mutual manifestness is the basis from which judgements relating to the optimal relevance of an utterance are formed. When talking with my beekeeping companions during an uncharacteristically cold and wet September weekend, I can comfortably assume that the following utterance will carry a positive meaning that they will easily recognise:

(9) The yard’s overgrown with ivy.

When talking with my sister, with whom the relevant facts and assumptions are not mutually manifest, the above utterance will carry a very different meaning. She will still assume that I have crafted my utterance so as to be optimally relevant and likely infer that my intended meaning was a complaint, perhaps that I wish to cut the pesky weed back, or perhaps, even, that I am asking to borrow some shears.

In order for something to be mutually manifest, it must meet two criteria. Firstly, it must be manifest within the cognitive environment of both individuals and, secondly, both interlocutors must recognise that the fact or assumption is manifest to both themselves and the other. For a fact or assumption to be manifest within two minds, both interlocutors need to have shared some similar input (be that perceptual or cognitive):

Clearly, if two people share cognitive environments it is because they share physical environments and have similar cognitive abilities’ (Sperber and Wilson, 1986: 41).

Here is where the problem may lie. In communication between an autistic and a non-autistic interlocutor, cognitive abilities clearly *aren't* similar.

Not only this, but it seems highly plausible that autistic individuals, with their divergent sensory and perceptual experiences, shaped by markedly different patterns of attention (see Chapter X), will possess maps of cognitive salience that differ significantly from those of non-autistic people. Which facts and assumptions are manifest at any given time, and the way in which representations are organised and accessible, may not be in any way similar to those of their non-autistic interlocutor. The degree of cognitive effort required to generate certain cognitive effects will also, therefore, be different. The recipe may be the same, but the values different. Both speakers may communicate according to the principles of relevance theory, but where assumptions of mutual manifestness are erroneously made, mutual understanding will break down.

One further suggestion made by Sperber (2004) regarding the pragmatic shortcomings observed in autism, is that autistic people are indeed computing information according to the same principles of relevance, but are doing so with a paucity of input:

[Autistic people] are using the relevance-theoretic comprehension procedure and following a path of least effort, but on the basis of impoverished input caused by their inability to interpret natural pragmatic clues such as gaze direction, pointing, facial expressions, etc. (Sperber, 2004 in an online discussion, in Wharton 2014: 479).

This suggestion affords autistic people a suite of cognitive abilities (featuring a primary search for relevance) that function in a very human way, and in the context of a body of autism research that, for a long time, has believed autistic people to lack some of the (quint)essential abilities that makes us human, this is a positive stance. Certainly, input will be qualitatively *different* given the significant sensory-perceptual and attentional differences known to exist between autistic and non-autistic people. However, talk of input 'interpretation' begs the question: interpretation according to what, and to whose criteria? If

the answer is that the criteria are those of salience and relevance, then the problem becomes somewhat circular. Sometimes, if we're lucky, mutual relevance comes naturally (with the likelihood of this usually increasing correspondingly with the amount shared in common). At other times it requires some negotiation.

There is a significant difference between (a) struggling to compute an impoverished input and (b) struggling to compute an adequately rich input but according to differently organised salience. This difference is important, for the latter means that there is scope to negotiate understanding, if both parties involved are willing to expend extra efforts. This idea of extra efforts and extra rewards is explored in the following chapter. Chapter F develops the theory of ostensive-inferential communication between two individuals with markedly different maps of relevance and teases out why this can sometimes work, and other times not. In so doing it looks to cases of successful communication—such as *English as a Lingua Franca*—where mutual manifestness is reduced to see if anything may be learned from them.

Chapter F: Cross-dispositional communication: Speaking with other wor(I)ds

“I just found Martha crying in the toilets”, my friend Sally tells me.³¹

I’d taken my dessert outside, with the words from the Tina Modetti speech: spoken at Frida Kahlo’s wedding to Diego Riviera and again just now by the trembling brides-man finger-pad-tapping inside my skull.

‘When people face each other with eyes wide open...’

Do people ever really do that?

Out back, the pub garden was spiced with plums and crab apples, dipping their branches low. Lingering evening sun dappled the faces of the few who had also come outside to finish their meal, perched like bright birds around one, large, circular table.

The cackling, giggling, prosecco-sipping mass waved a few arms out towards me as I stepped down onto the cobbled path.

“Come sit with us, sweetheart! We can make room!”

To the left of them, on the other side of the path in a shady area was one grey-suited man, sat alone. His grey hair, almost chin length, stuck out at odd angles. Half-slumped, his grey hands were folded into his grey lap. With his feet planted squarely on the floor, his knees were bent at right angles, raising the trouser hemline to expose a thick streak of grey shin above each of his socks; dark blue, to match his bow-tie.

³¹ Names in this following section have been changed to protect anonymity.

Calling back my thanks, I picked my way, slowly, over to the shaded side, cautious not to spill my fizz as I moved.

“Do you mind if I join you?” I asked, my voice soft, eyes down to the ground.

“Oh no, no! No, please, no, please sit down!”

As I ate my dessert, unhurried, I offered some to Martha’s older brother: the brother I’d not heard mentioned in 15 years until, on receiving my invite to the wedding, and when I’d reminded her I’m not always great in crowds, he came out as a form of reassurance. Reassurance that I wouldn’t be the most autistic person there because he was, like, *properly* autistic. Never spoke. He’d probably wander off for a walk over the Downs to get away from it all, she’d said. He was always wandering off.

Martha’s brother took up my offer of some brownie and reciprocated with a fresh raspberry from his Eton Mess. We continued to sit in silence together, occasionally nodding and smiling for five minutes, for ten minutes... I liked his company. After hours of small talk and catching up with old friends, and *pleases* and *thank yous* and *oh my goodness your child has grown!* this sitting together was a solace. Easy.

Mmm! Martha’s brother would occasionally murmur, spooning meringue into his mouth.

Mmm! I’d agree, rolling chocolate around my tongue.

As we both stared ahead, resting our eyes on the grass blades quivering in the breeze, a small bird alighted on the ground before us.

“What, what, what kind of bird do you think that is then?” Martha’s brother asked me and

VOILA!

Birds had once been a special interest of mine, so I tumbled into a rusty repertoire of animated facts and anecdotes, with Martha’s brother

chuckling now. He made a joke about Doctor Who, something I didn't understand at all because I've never seen any Doctor Who, but what I did understand was that he was making a joke so I laughed with him, and it felt funny! And told him I didn't really know much about Doctor Who as I didn't have a television and lived on a boat, which he found funny! And we spoke about my boat, and his room where he lived in his mum's house, and what we liked to do in our spaces and...

From nowhere, Martha was standing in front of us, beautiful, back-lit by low sun in her vintage dress, announcing the arrival of the taxi that had come to take Martha's brother home. We'd been sat there for almost an hour.

This had been some time ago and I'd not yet seen Martha since, but here was Sally, long skirts sashaying over the grass towards me, coming to share a quiet moment under the sunset.

"...She said it made her day, seeing him so happy; seeing him have someone to talk to."

I smile back at my friend, but feel the tug of sadness.

Why weren't those things normal?

The previous chapter moved towards the exploration of communication within an intersubjectivity framework. Implicit in such a framework is a recognition of differing subjects, each distinctly individuated. This chapter, then, takes as its starting point Milton's (2014b) concept of a human 'dispositional diversity'—itself founded on Bourdieu's (1990) treatise on habitus. This 'dispositional diversity' acknowledges the way in which the constraints of society and culture shape an individual's developing selfhood. Additionally, by virtue of being embodied subjects, individuals are understood to experience differentiated trajectories through their unique experiencing of the world, society and themselves.

Combined, these two forces forge a vast diversity of human dispositions that may be grouped into loosely similar types according to shared cultural and societal influences.

Building on ideas from Chapter X, where it was argued that an embodied, enactive account of autism suggests a divergent perceptual and cognitive experience of reality, Section 1 of this chapter questions whether the notion of an ‘autistic disposition’ might be useful? Section 2 revisits the ToM construct in relation, specifically, to cross-dispositional communication (i.e., in this case, between autistic and non-autistic individuals) and puts forward some alternatives for where it may fall short. Section 3 makes the argument that cross-cultural communication may be an insightful point of reference when thinking about cross-dispositional communication. It casts the net out to English as a Lingua Franca (ELF) as a successful, working example and uses relevance theory to examine why this might be so. Finally, in Section 4, the ‘borderland’ is explored as a potentially fertile metaphor for situating these cross-dispositional encounters.

1. An autistic disposition

Chapter X outlined the various ways that autism has been conceptualised over time, from a number of different perspectives. It moved through a medical framing of autism as a disorder, towards more recent positionings of autism as a neuro-developmental difference. Necessarily, theories of autism attend to the condition in a general sense: as a set of traits and characteristics that most commonly manifest among individuals diagnosed as ‘autistic’. What is more useful for an investigation of autistic language use, perhaps, is to begin to think about the autist as one individual engaged in a communicative dyad. Thinking of each interlocutor in terms of their diagnoses, or lack thereof, may not be helpful. Yet, if we do not, how else might we think of the differences that clearly do exist between these two types of minds (crudely categorised), and how these are both populated and organised? When every mind is unique, at what point does difference become significant enough to interfere with successful communication? This section (and the rest of this chapter) aims to build an argument for *dispositions* as a potentially useful method of distinguishing minds that either converge or diverge.

1.1. Autism as a (human) way

What is this thing that I study, that I chase after, that I dance around, and try in fleeting moments to dance with? The thing I study is more like color than like color-blindness—it's a thing that happens between sensing bodies and sensuous worlds, in all the particularity of each. I have come to think of the thing I seek out as a mode of engagement with the stuff of the world—a way of being with one's surroundings. In particular, it is a form of permeability, of deep existential vulnerability, to the order of things around us: structured systems, elements in their robust relation, arrangements both deliberate and disavowed. What we say and do about autism, therefore, also tells something about how we relate to these surroundings of ours.

(Fein, 2018: 130)

Questions about autism are questions about being human, and questions about being human in the context of the natural and created environments we have made for ourselves. A handful of theorists (e.g. Chapman, 2019a; Chown, 2012; and Hobson, 2009) have drawn on Wittgenstein's (1968) work on *language games* and *forms of life* as a means of explaining the social 'impairments' seen in autism. Very broadly, language games constitute the customs of language use and the play through which their functions are learned (see: Chapter Z for more). According to Chown (2012), an inability to acquire competence in these games—due, for example, to developmental delay—may result in difficulties with social engagement and therefore in subsequent language game learning. From a Wittgensteinian perspective, 'forms of life' refer, roughly, to the groupings of individuals—and to a broader extent, sentient beings—who share representational forms (and in this sense, then, a *form of life* may be thought of as sharing an *Umwelt*). As Wittgenstein famously said, 'if a lion could talk, we could not understand him' (1968: 223^e).

What is central to the forms of life concept is that common cultural practices unite a group of people in a shared way of experiencing the world. A risk of this view, when it comes to autism, is of casting autists somehow outside of a *human form of life*, in their evident difficulties to partake in their (local) shared ways of being. Chapman (2019a) has extended

Wittgenstein's groundings and proposes autism as a form of life in its own right. Based, in part, on empirical evidence for the DEP and the fact that autistic people often demonstrate synchronous intersubjectivity with other autists (see Chapter X, Section 1.2.3.; and Chapter C, Section 3.2) Chapman posits an autistic way of being in the world as one, other, human way.

It is not, Chapman argues, that autistic individuals have experienced a hindered 'access to a shared world of linguistic meaning' (Chapman, 2019a: 421) or have not been 'properly attuned to humanity's shared form of life, and thus humanity's rules of language and meaning' (Chapman, 2019a: 425, paraphrasing Hobson). To say so is to gravely dehumanise and also overlooks the many autistic individuals who do develop language and competent use of 'language games'. It is simply that—perhaps for reasons outlined in Chapter X, Section 2—autistic people inhabit divergent *Umwelten*; their intrinsic 'forms of life' are one (of perhaps several) different way(s) of being human.

In a book of collected essays culminating from a workshop held by the Society for Psychological Anthropology (Fein and Rios, 2018), Fein lays out a similar conceptualisation of autism as a distinct 'mode of engagement' (Fein, 2018: 129). Fein spent several years conducting ethnographic research around the autism diagnoses and experiences of autistic adolescents transitioning into adulthood in the USA. Over that time, and through repeated encounters with autistic people, she arrived at the impression of autism as a form of 'deep involvement with external ordering systems—systems which are by their nature limited and limiting, as well as generous and generative' (Fein, 2018: 131). In order to understand this, we may need to rewind a little.

All humans, in Fein's view (adopted from Geertz, 2000) rely on 'extrasomatic arrangements' (2018: 131) through and by which they may organise and make sense of themselves. Pointing back to Geertz's (2000) theorising about the relationship between culture and human subjectivities, Fein cites his assertion that 'we are, in sum, incomplete or unfinished animals who complete or finish ourselves through culture' (Geertz 2000: 49). Humans who are determined as being autistic, Fein argues, are those most 'profoundly shaped by the patterns, the contours and affordances of the lived record of human endeavour' (Fein, 2018: 131).

This may seem at odds with the traditional view of autistic people as solipsistic and detached from the world around them—an irony Fein herself notes. How could perseverance or ‘special interests’, which are so intense that they occlude all other things, reflect a greater sensitivity to the inarguably socially-situated cultural affordances? Fein draws on interviews with three of her autistic participants: discussing their various special, obsessive interests in dinosaurs, compound interest and verbatim film and advert scripts. In the case of one young autistic man, Steve, ‘shifting [his obsession] from trains to dinosaurs transformed the horizons of Steve’s cognitive, social, temporal, and experiential world’ (Fein, 2018: 135). Through a fascination with these prehistoric creatures, Steve’s perception of time and the physical world around him was deeply altered. For Dave, another young autistic man enthralled by compound interest;

his appreciation for the systematic laws of finance did not exist in isolation from his experience of the interpersonal world and its traumatic vicissitudes. Rather, he used these laws like a genre, or a master-narrative, structuring causal and temporal relationships between events and formulating his own expectations and sense of personal identity through their promises (Fein, 2018: 138).

Just like 11-year-old Eric, who, whilst on the phone to his grandmother spontaneously recited the script he’d memorised from the ‘elder-alert button’ advertisement he’d seen on television as a means of expressing his affection and concern for her, Dave was also leaning on formalised structures from the social world around him to, as Geertz would say, ‘complete’ himself. Is this kind of reliance on extrasomatic artefacts much different to a non-autistic person’s reliance on a diary to remember appointments, on a penned to-do list stuck up on the fridge, or the use of Google search as a type of extended knowledge plug-in? Fein argues that it is not, it’s just that autists are more vulnerable to and synchronous with their immediate environment.

1.2 Predictive processing and autism

In the last decade, several accounts have emerged describing autism from a predictive processing perspective (see Chapter X, Section 2, for an introduction to predictive processing), which may help to further frame autism as a (neurological) disposition. Pellicano and Burr (2012) hypothesised that *hypo-priors*—i.e. attenuated Bayesian predications, or beliefs—may lead to a greater reliance on real-time, bottom-up, sensory input: making perception both more ‘accurate’ (2012: 504) and also potentially more overwhelming. Friston, Lawson and Frith (2013) added some technical nuance to this argument in their commentary on the article, by bringing in the issue of *precision*. A Bayesian, or predictive processing model of cognition sees our brains not only predict our experiences, but also the *degree of confidence*, or ‘precision’ that ought to be attributed to the prediction errors:

Heuristically, one can regard ascending prediction errors as broadcasting ‘newsworthy’ information that has yet to be explained by descending predictions. However, the brain also has to select the channels it listens to by adjusting the volume of competing channels. Neurophysiologically, this corresponds to adjusting the gain of prediction errors that compete to update expectations (Friston, 2016: 2-3).

In their refinement of Pellicano and Burr’s (2012) theory, Friston, Lawson and Frith (2013) suggest that it is likely the *precision weighting* given to prior beliefs that is atypical in autism, is not a weakness of prior beliefs themselves. They place this disfunction at the level of ‘metacognition’, for, they argue, it represents a ‘failure of beliefs (estimated precision) about beliefs (predictions)’ (Friston, Lawson and Frith, 2013: 1).

One problem with these theoretical contributions (and others, such as those of Brock, 2012; Lawson, Rees, and Friston, 2014; and Van Boxtel and Lu, 2013) is that whilst rooted in computational cognitive theory, they remain largely qualitative and speculative. In an effort to empirically test the claims made by a predictive processing theory of autistic cognition, Karvelis et al. (2018) devised a simple visual statistical learning experiment to measure the

influence of in-test-learnt priors on perception. One particular aim for the study was to try to differentiate between the two competing theories for the cause of the relatively weaker influence of priors in autistic perception/ cognition: i.e. between somehow attenuated priors (a—loosely—top-down problem) or enhanced sensory precision (a—loosely—bottom-up one).

In this study, participants were asked to watch several hundred short clips of a coherently moving cloud of dots—more or less visible each time—and state which way the dots had been moving. Unbeknownst to the participants, certain directions (plus or minus 37 degrees) were statistically more frequent and by a certain number of repetitions participants had (implicitly) learnt the bias. Moreover, in clips where stimulus visibility was low, or there were no dots at all, priors would begin to create false positive ‘hallucinations’ of the dots moving in the most common direction (Karvelis et al., 2018: 7).

An immediate limitation is that its participants were not diagnosed autistic, but members of the general population screened with the standardised autistic quotient (AQ) test, with ‘autistic traits’ mapped against experimental results. The AQ is not a diagnostic tool per se, and whether or not correlating AQ-measured autistic ‘traits’ alongside observed differences in perceptual behaviour is a valid means of generating conclusions applicable to actually autistic individuals is a discussion beyond this thesis, but worth having. Nevertheless, the design and analysis are clever, and the results still merit mention.

The researchers found that participants with high autistic traits acquired the priors (through the implicit statistical learning) just as effectively as participants with low or no autistic traits. However, what was interesting was that those participants scoring more highly on the AQ demonstrated ‘more veridical perception and weaker influence of expectations.’ (Karvelis et al., 2018: 1). In other words, incoming sensory information was more accurate. Following application of Bayesian modelling to the collected data, the researchers were able to identify that this was not due to attenuated priors—priors formed by participants with a high AQ score were equally as strong—but by ‘more precise sensory representations’ (Karvelis et al., 2018: 1).

Whilst these results go some way towards providing evidence for a predictive processing theory of autistic differences in perception and cognition, and point towards enhanced

perceptual precision as the cause, they stop short of addressing why it is that this may be so. How, too, these results may reframe early theories of autism such as the weak central coherence theory (see: Chapter X, Section 1.1.2), and map onto a monotropic account of autism (see: Chapter X, Section 1.2.2 and above, Section 1) deserves some future attention.

All these predictive processing accounts mentioned above still largely rely on the language of deficit; there is a *failure* of Bayesian inference, a *disfunction* in the brain, an *inflexibility* around tolerating ambiguity (the inflexibility here is, curiously, at a neurological level). Could it not be the case that, as per the monotropic theory of autism—where human attention allocation is seen to be ‘normally distributed’ and ‘genetically determined’ (Murray, Lesser and Lawson, 2005: 140)—there is a range of propensity towards wide or narrow precision weighting of priors along which any individual may sit, with autists tending to fall to one extreme end?

To have a detail-oriented, more sensorially rich and perceptually ‘accurate’ perception is not necessarily a negative thing: either for the individual or for society. Studies have found that autistic people have, among other beneficial traits, a greater eye for detail (Shah and Frith, 1983, Swettenham et al., 2014); reduced susceptibility to visual illusions (Happé, 1996); and, in some cases, perfect pitch (Heaton, Pring and Hermelin, 1999). For the human species to have (at least) one percent of its members possessing such qualities of attention and perceptual acuity is potentially evolutionarily advantageous. Divergent thinkers and perceivers often innovate, identify threats unperceived by others, or simply notice things sooner. It may be selectively useful for community to include minds that prioritise perceptual precision over other functions when we need to evade predators, find food, or problem-solve. One of the places, then, where it perhaps becomes problematic, is where the modern world has boomed in its informational intensity beyond the rate at which our minds can keep up. In a world critically and increasingly populated by man-made entities demanding attention such a mind can become, at times, overwhelmed.

If it can be concluded that autism might be satisfactorily described as a ‘disposition’, it seems reasonable to say, then, that so-called ‘cross-neurological’ (Beardon, 2017: see Chapter X) communication is essentially *cross-dispositional* communication. This assertion is important, as it has implications for how we look at communication that occurs across a dispositional divide. Theories of communication and utterance interpretation—including

relevance theory—are generally bounded by the caveat of ‘all other things being equal’. In the case of cross-dispositional communication, all things clearly are not. It matters too, for how useful the construct of ToM may be when dealing with minds of very different dispositions, as is explored in the section to come.

2. Mutual understanding in cross-dispositional communication

It takes more work to communicate with someone whose native language isn't the same as yours. And autism goes deeper than language and culture; autistic people are 'foreigners' in any society. You're going to have to give up your assumptions about shared meanings. You're going to have to learn to back up to levels more basic than you've probably thought about before, to translate, and to check to make sure your translations are understood. You're going to have to give up the certainty that comes of being on your own familiar territory, of knowing you're in charge...

(Jim Sinclair, autistic autism-rights activist, 1993: 2)

2.1 The utility of the 'theory of mind' construct

A deficit in ToM abilities has long been associated with autism (see Chapter X, Section 1.1.1). The reduced ability to impute mental states to others has also been assumed to run in tandem with a deficit in the processing of other's emotions (Brewer, Cook and Bird, 2016; Fletcher-Watson and Bird, 2019). Autistic people have generally been considered to be lacking in both cognitive and emotional empathy, and whilst research has at times supported this assumption, at others, it has not (Brewer, Cook and Bird, 2016).

Particularly in the case of emotion processing, empathy is, arguably, contingent on an ability to perceive one's own emotional states. As briefly mentioned in Chapter X, alexithymia is a condition affecting an individual's ability to interoceptively recognise and /or identify their emotions. Alexithymia is present in around 10% of the general population yet approximately

50% of autistic people are thought to have it (Bird et al 2010; Brewer, Cook and Bird, 2016; Garfinkel et al. 2016). This increased rate among the autistic population may account for the perceived increase in difficulty for autistic individuals to ‘catch’ (Hatfield, Cacioppo and Rapson, 1992) another’s emotion. Yet, with or without alexithymia, high-speed, intuitive emotion recognition in others is, arguably, contingent on the facial, postural and vocal motor behaviour of the other being identifiable on a somatic level. Divergences in how emotions are experienced and (consciously or unconsciously) performed will lead to a breakdown in this so-called ‘emotional contagion’ (*ibid*).

Current, state-of-the-art research in social cognitive neuroscience argues for a view of cognition that is socially and contextually embedded, as well as enactive and embodied (see Chapters X and Z for summaries). This body of work challenges the view that intentions are ‘not things that can be seen’ (Gallagher, 2008: 539), and looks to how the sensorimotor system responds to kinematics (i.e. the properties of motion in an object: here a person) to gather ‘intention-from-movement information to understand other’s behaviour’ (Ansuini et al., 2016: 375).

Based on a predictive coding account of perception and cognition, according to Ansuini et al. (2016), we engage with another whilst holding an initial prediction of (a) their state and intentions and, therefore, (b) how they will move. Our predictions though, crucially, are formed ‘on the basis of our own action system’ (Ansuini et al., 2016: 386). Where there is a prediction error—or gap—between what we perceive and what we have predicted, our predictions will be updated regarding the intentions of our companion. How we think the other feels, or what we think they intend, is based on how *we* would feel or intend should our bodies move the way the other’s body is appearing to move. All of this calculating is taking place, of course, beyond our conscious awareness.

This may go some way towards explaining the results of a recent study by Aransih, Edison, and Penton (2019), who found that neurotypical (here, ‘non-autistic’) observers rated the arm-swing movements of autistic participants as significantly ‘less natural’ (2019: 1) than those of the non-autistic controls. While this study was far from naturalistic—rating participants were viewing spliced video recordings of a decontextualized arm-swing—it does add support to a growing body of work describing the way in which non-autistic people can perceive the behaviour of autistic people as *not quite right* (see Chapter X, Section 1.2.3 for

further examples). The autistic movements were described as abnormally jerky, and the authors believed that the ‘neurotypical individuals characterised the autistic arm movements as less natural because the abnormal kinematic feature did not fit their internal representation’ (Aransih, Edison, and Penton, 2019: 3).

Overall, it could be said that a difference between a prediction based on one’s own mode of responding, and the actual responses of another appears to open up some serious room for error in terms of accurately predicting and/or inferring the mental states of others whose embodied disposition diverges from that of the inferring subject. In this sense then, a ToM account of mindreading, when dealing with cross-dispositional communication, is potentially insufficient. However, there are alternative theories, laid out in the following sections, that address how intentions may be inferred and representations shared or transmitted, that may serve this purpose better.

2.2 ‘Mind-space’

In seeking to account for the individual differences exhibited in ToM proficiency (see Chapter X, Section 1.1.1 for discussion), Conway et al. (2019) proposed a multidimensional mapping of how we represent other minds, that they termed ‘Mind-space’. The hypothesis behind their model was that ‘the accuracy of mental state inferences can be explained by the ability to characterise the mind giving rise to the mental state’ (Conway et al., 2019: 2). In many ways, this is simply common sense. However, when applied to the fact that minds can be organised very differently, it begins to give way to a more nuanced reading of how ToM tasks may unfold.

Mind-space draws on the concept of ‘Face-space’, which is a theoretical multidimensional cognitive space against which dimensions of individual faces are plotted and represented (Valentine, 1991). As such, Mind-space is seen as a set of vectors reflecting ‘any characteristic of minds that allows them to be individuated’ (Conway et al., 2019: 2). Mind-space thus represents the extent to which (one accounts for how) minds can vary. Conway and colleagues’ (2019) hypothesis suggests that the more accurately one is able to plot

another's mind within Mind-space, the more attuned one's inferences about said mind will be.

Crucially, minds moderate the link between situational contexts and the mental states they evoke: two different target minds in the same situation may generate completely different mental states. The accuracy with which those target minds can be represented, therefore, is likely to contribute to accuracy in inferring the target's mental states (Conway et al., 2019: 2).

An example of how this might be so is given in a slightly earlier paper by Conway, Catmur and Bird (2019). The researchers first draw the important distinction between ToM ability, defined 'as the ability to *represent* mental states' (Conway, Catmur and Bird, 2019: 800) and what it is that empirical ToM measures tend to test: namely 'the ability to make accurate mental state *inferences*' (*ibid.*). What this distinction means is that a participant in a test may be able to represent the mental state of the other while still drawing incorrect inferences. Turning to the famous Sally-Anne, false-belief test (see Chapter X, Section 1.1.1), the researchers question how the results may be affected if Sally (the character returning to look for her ball / doll / bottle of champagne) is known to be highly suspicious? In this case, it is plausible that Sally would first check her hunch that Anne has hidden her treasured item. A participant engaged in this condition who 'has a dimension of suspiciousness in their Mind-space and who recognizes that Sally is at the extreme end of this dimension' (Conway, Catmur and Bird, 2019: 803) may fare better in correctly anticipating Sally's actions, than a participant who either has a weak suspicion dimension or inaccurately places Sally along the continuum. Figure (1), below, gives a further depiction of how this may work. In this diagram, in panel II, an average participant (A), in condition (1), would place Sally at the population mean of suspiciousness, whereas given the additional information in condition (2) that Sally is, in fact, a suspicious character, they would likely place her at higher than the mean, affecting where she (the participant) may predict Sally will look for her ball. Likewise, a different participant (B) who has 'been exposed to an untrustworthy population' (*ibid.*) will, in condition (1)—i.e. with no additional information—likely place Sally at higher than

the population mean, and when told of Sally's extreme suspiciousness (in condition 2), place her even higher.

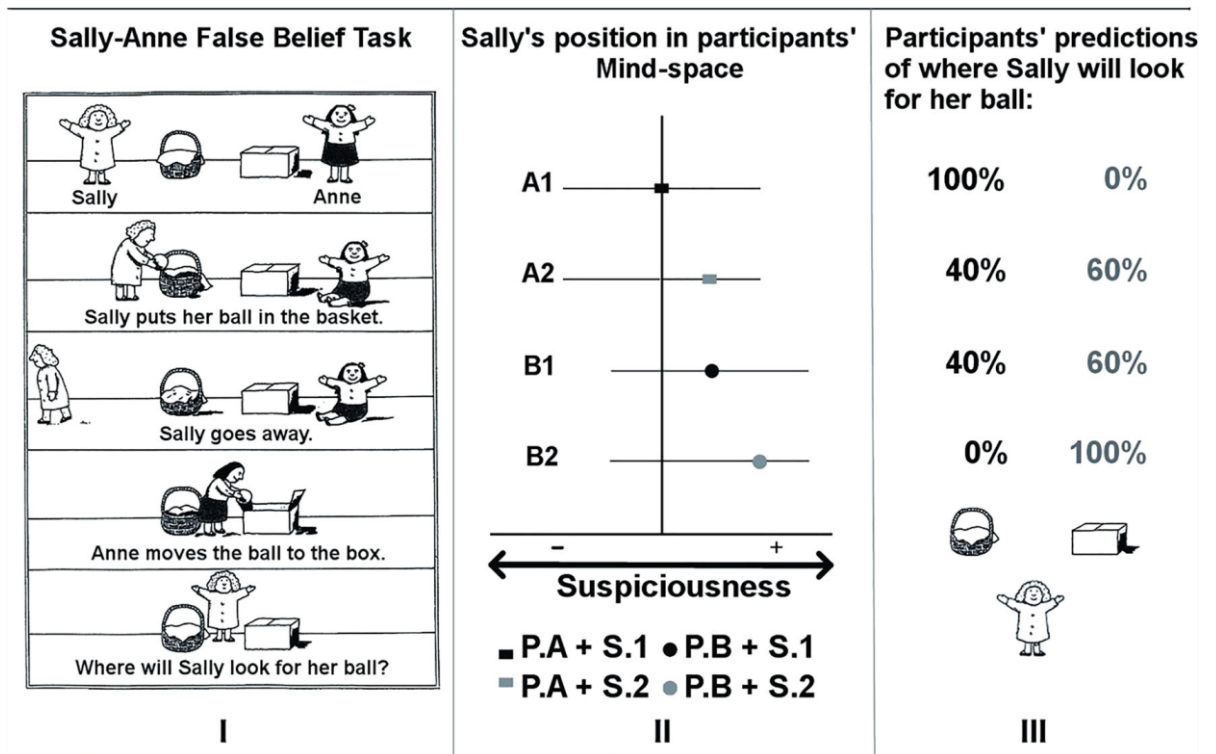


Figure 2: 'Suspicious minds: How Mind-space explains performance on the Sally-Anne false belief task'.

(Conway, Catmur and Bird, 2019: 803)

The important difference between hypothetical participants A and B, above, is the composition of the population to which they have been exposed. Conway et al., (2019) undertook four empirical experiments to test the predictions made by the Mind-space theory, and the results supported this notion, that 'locating another mind within Mind-space, may depend upon the particular mind to be modelled and its relationship to the kinds of minds one has previously encountered which have shaped one's Mind-space' (Conway et al., 2019: 50). The impact of this is significant. It is one's own Mind-space shape, and the Mind-spaces of those with whom one comes into contact, particularly in formative years, that defines the parameters of one's mapping of the potentiality of other minds.

The implication this has for atypical minds is also significant, as the authors recognise:

The idea that one's theory of mind ability may depend on the target mind to be represented has interesting implications for atypical groups. Neurotypical participants may perform well on existing theory of mind tasks in which the 'correct' answers are derived by neurotypical consensus...as their own mind is similar to the average. Conversely, neurotypical participants may also have minds that are particularly easy to represent by the majority of the population. In contrast, those who have atypical minds may find it harder to represent the minds of neurotypical individuals, and in turn, be harder for neurotypical individuals to represent (Conway et al., 2019:51).

This certainly supports those results from research investigating the DEP that have found exactly that (see: Chapter X, Section 1.2.3). It also rather brings to mind something of Ochs and Solomon's (2010) theorising about autistic sociality (mentioned earlier, in Chapter C). Building upon the linguistic anthropological notion of repertoires, they extend this to include not only 'languages, dialects, registers, jargons, and styles' (2010: 72), but also 'repertoires of social coordination [...] organized by individual and sociocultural lifeworlds' (*ibid.*). Arguing that in any community, these individual repertoires will only ever partially coordinate, the implication is that an autistic sociality is even more divergent, with less potential for crossover of repertoires between autistic and non-autistic interlocutors. According to Ochs and Solomon, autistic individuals therefore possess a:

characteristic range of possibilities for social coordination that is shaped not only by their disorder but also by the sociocultural practices of the communities they inhabit and the interlocutors with whom they interact (Ochs and Solomon, 2010: 74).

In this way, again, what matters for successful mutual understanding is the extent to which the dispositions of the two interlocutors are compatible. The Mind-space framework seems to offer a means of accounting for this.

2.3 Dialectical misattunement hypothesis

The *dialectical misattunement hypothesis* (Bolis et al., 2017) attempts to explain mismatches in social interaction from the perspective of predictive processing (albeit one—again—couched within a medical model). Central to this theory is a dialectic view of ‘psychiatric’ (Bolis et al., 2017: 355) conditions: whereby it is not merely a single, ‘disordered mind’ that is generating discord, rather ‘a dynamic interpersonal mismatch that encompasses various levels of description’ (*ibid.*). In framing ‘traditional dichotomies’ (such as organism/environment; individual/society...) ‘as both a result and a cause of reciprocal adjustments’ (Bolis et al., 2017: 356) the approach appears to be in accord with an enactive, embedded view of cognition.

The authors put forward the idea that the socio-communicative issues arising (apparently) on account of autism, should instead be thought of as (at least in part) emanating also from a ‘cumulative misattunement between persons’ (Bolis et al., 2017: 359). These misattunements—here described as ‘disturbances of the dynamic and reciprocal unfolding of an interaction across multiple time scales’ (*ibid.*)—mirror the breakdowns in mutual understanding described by the DEP. The hypothesis generated by this account, namely that interactions within ‘homogenous dyads are expected to appear smoother, compared to heterogeneous dyads’ (Bolis et al., 2017: 359- 360) are indeed supported by empirical work investigating the DEP (e.g. Crompton, Fletcher-Watson and Ropar, 2019a, 2019b; Heasman and Gillespie, 2019).

What makes Bolis et al.’s (2017) account most interesting is its effort to apply the concept of predictive processing to intersubjectivity: specifically, cross-dispositional intersubjectivity. In their view, two inter-related processes may be occurring. On the one hand, misalignments in communication result from ‘increasingly divergent predictive and (inter-)action styles across individuals’ (Bolis et al., 2017: 369), and on the other, these misattunements ‘could result in impoverished opportunities for acquiring socio-culturally mediated knowledge and skills’ (*ibid.*).

The move from a focus on individual, ‘disordered’ minds towards one that foregrounds interactional accomplishments within any given dyad is both personally appealing, and in line with a new trend in intersubjectively-situated autism research. The dialectical attunement hypothesis does, however, still seem to leave the lion’s share of the responsibility for communication breakdown with the autistic individual. It is the autistic whose predictive abilities develop askew, and whose life-long opportunities to acquire ‘socio-culturally mediated knowledge’, are ‘impoverished’(*ibid.*). Moreover, the assertion that ‘weak communicative coupling’ (Bolis et al., 2017: 370) may reinforce and enhance predictive errors (that then reinforces weak communicative coupling...) seems counter-intuitive, given that the purpose of prediction errors is to refine one’s perception of reality in real-time. It seems to overlook the possibility that speakers can be self-aware, engaged agents able to self-monitor and notice not only prediction errors on a neurological level, but also misunderstandings on a conscious, subjective one.

2.4 Participatory sense-making

One final framework to note that offers an alternative view of (potentially cross-dispositional) communication is that of *participatory sense-making*, put forward by de Jaegher and colleagues (Cuffari, Di Paolo and De Jaegher, 2015; De Jaegher, 2013; De Jaegher and Di Paolo, 2008; Di Paolo, Cuffari, and De Jaegher, 2018). Based on an enactive framework of social cognition, ‘sense-making’ is seen as an engaged activity undertaken by a cognitive being towards (and with) its environment.

Being a cognitive system means that exchanges with the world are inherently significant for the cogniser who engages in the creation and appreciation of meaning or *sense-making* (De Jaegher and Di Paolo, 2008: 36).

The theory of participatory sense-making seeks to challenge the individualistic view of (social) cognition that has long dominated the field and, as such, frames communication as taking place between two, coupled, embodied agents, both assisting in the sense-making of

the other. Communication, when it works, is seen (or felt) as an intersubjective engagement between agents, manifested in ‘fluctuating feelings of connectedness with an other, including that of being in the flow of an interaction’ (De Jaegher, 2013: 6). Flow, here, is what is achieved through naturally arising coordination: a gathering of its own momentum.

Viewed from this perspective, the difficulty for two agents with dramatically different embodied experiences to easily achieve coordinated coupling in their participatory sense-making is more apparent, and mirrors similar difficulties posited by both the Mind-space framework and dialectic misattunement hypothesis described above.

Sensorimotor differences, especially those involving temporal aspects of perception and movement, will affect interaction and coordination in social encounters, and therefore introduce systematic differences in participatory sense-making. This is true the other way around as well (De Jaegher, 2013:11).

Once again, whilst the autistic individual is usually identified as the source of the disruption to an ordinarily expected communicative flow, from the viewpoint of participatory sense-making, it may be either interlocutor who is struggling to couple with an embodied agent who, arguably, resides in a ‘differently salient social world’ (*ibid.*).

Section 2 has explored various theories to explain how it might be that we can achieve mutual understanding across two very different types of minds: or ‘dispositions’. Where dispositions are dissimilar, it might be logical to expect increased difficulties. However, communicating cross-dispositionally is not necessarily as impossible as the preceding section may have made it sound. All around the world, at this very moment, cross-dispositional conversations of many different kinds are taking place, and succeeding in achieving mutual understanding. But how? After taking a detour through an argument for why *cross-cultural* may be considered *cross-dispositional*, Section 3 aims to explain by use of a working example: English as a Lingua Franca.

3. A working model of cross-dispositional communication

Every morning I'd fly down the steep residential road, one hand invariably holding the croissant I was trying to, at the same time, stuff into my mouth, the other gripping the bike brake and arrive, pink-cheeked from the wind, outside the tall Georgian building. I'd climb a series of narrowing, carpeted staircases, pushing through weighted doors with books and scissors and piles of papers balanced against my chest and under my chin, and set up the room ready for the small groups of professionals who had travelled from Europe, South America, Japan, or Russia to 'perfect' their Business English.

Something *different* was happening in these small rooms... different to any other English as a Foreign Language class I'd taught before. Traditional measures of linguistic ability seemed to matter less than the functional competence of these speakers whose English mediated their day-to-day professional activities. Here were experts in their own fields, using sometimes very 'broken', simple English to navigate complex interactions or negotiate contracts. The ones who were most communicatively successful were those who were able to... *to what?* I didn't really have a word for it...

It was partly something that had become a bit of a buzz-phrase at the time—*intercultural communicative competence* (Byram, 1997)—but it was also something more than that: something I couldn't explain at the time. Something about *receptivity*. Something about humour (my donkey-laughter would ricochet out into the corridor, bouncing off chrome-framed prints of the pier, raising the eyebrow of my boss in his far office, at their jokes). Something about expanding themselves... over the linguistic, the cultural, the cognitive gaps that stood between them and their interlocutor... Something about *English as a Lingua Franca*.

3.1. Cross-cultural : cross-dispositional

In order to engage in discussion about the mechanics of cross-cultural communication, one must first clarify what is meant by the term ‘culture’. Yet ‘culture’ is a notoriously difficult construct to define: it can mean many different things depending on the lens through which it is being viewed. Beyond the essentialist folk association of culture with nation state, culture can mean anything from social norms, local traditions, shared beliefs and language to the intellectual or artistic outputs of a group or individual (Williams, 1976). In terms of how culture functions and perpetuates itself, it has variously been described as; (a series of) ‘complex and emergent’ social systems that ‘emerge through individuals’ participation in the world giving rise to sets of shared beliefs, values, attitudes, and practices’ (Baker 2015: 14- 15); ‘shared, differentially distributed pragmatic knowledge’ (Kronenfeld, 2014: 82); and even as an adapted ‘buffer’ against biological natural selection in human evolution (Bender, 2019: 2).

In relevance theoretic terms, an individual’s cognitive environment (see: Chapters Z and C) amounts to the facts and assumptions available to that individual at any given time. These facts and assumptions are clearly cognitive artefacts, residing *within* the mind of the cognizer, and yet they are also, intuitively, culturally mediated in the sense that language is acquired within a cultural context, representing culturally determined concepts.³² Of the numerous theories put forward to propose the relationship between culture and concepts or mental representations, one that fits most harmoniously with relevance theory is Sperber’s (1985) own *epidemiology of representations*.

Sperber’s theory, importantly, acknowledges that the micro processes taking place within an individual’s mind are both psychological, and at the same time part of more macro-cultural processes. He argues that cultural things:

³² However, some nativists, such as Chomsky, 2000, and Fodor, 1983, have not been fully convinced that this should be the case.

are distributions of representations in a human population, ecological patterns of psychological things. To explain cultural phenomena is, then, to develop an epidemiology of representations (Sperber, 1985: 73).

Representations, here, are seen as mental objects than can be transmitted, in a manner not dissimilar to that of a virus, between host minds, with the ‘more widely-distributed, long-lasting representations’ (Sperber, 1985: 74) constituting what is referred to by the term ‘culture’. There is much more that the epidemiology of representations account has to say about minds and culture that goes beyond the remit of this chapter. Crucially, what it contributes here is the sense that the membrane between an individual mind, and the culture(s) within which it is located, is permeable. The facts, assumptions, beliefs and sensibilities of an individual—i.e. their cognitive environment—and therefore the associated relevance values are directly shaped by the culture(s) within which they participate. What is relevant, or even known to one individual from culture X, for an individual of culture Y may not be so, or may be so but to a lesser degree.

One further framework of interest that addresses culture with a small ‘c’, is the notion of *communities of practice* (CoP).³³ The term, originally coined by Lave and Wenger (1991) and developed by Wenger (1998a) describes the grouping of people around a central, shared practice. This grouping could be based around a wide range of shared practices including the using and selling of street drugs, working in a car dealership, or membership of a belly-dancing club. A CoP is defined as being a ‘*joint enterprise* as understood and continually renegotiated by its members’, based on ‘*mutual engagement* that bind members together into a social entity’, producing a ‘*shared repertoire* of communal resources (routines, sensibilities, artifacts, vocabulary, styles, etc.) that members have developed over time’ (Wegner, 1998b: 2).

³³ Murray’s (2020) use of the term ‘communities of interest’ in her monotropic interest-model of autism surely includes a nod to communities of practice.

Originally conceived of as part of a broader theorising about situated learning, over time CoP has been applied to numerous contexts of intra-group communicative practices and was first applied to linguistics research in 1992 by Eckert and McConnell-Ginet. Ehrenreich (2018) for example, has observed how CoP may be adapted to frame our understanding of business communication using English as a Lingua Franca (see: Section 3.2., below, for more on ELF). Most recently the framework has evolved to acknowledge the need to navigate *between* CoPs, and as such has begun to be used to talk about ‘landscapes of practice’ (Wenger-Trayner and Wenger-Trayner, 2015). While this new development is still couched predominantly in the language of professions and social learning, as with Wenger’s (1998a) original CoP theories, landscapes of practice refers to a larger, collective domain of a body of related knowledge, populated and informed by constituent CoPs. An example might be, using the above case of street-drugs, how such a landscape of practice might include the expertise of the various CoPs involved in the import or manufacture of the drugs, distribution chains, management of county lines, gang hierarchy, where users and sellers partake locally, and so on.

What is interesting (and relevant to this work) about landscapes of practice, is that it recognises the need to negotiate meaning across boundaries:

Meaning is produced in each practice. Because this makes mere subsumption [of other practices] impossible, relationships between practices are always a matter of negotiating their boundary. Without subsumption, the boundaries between practices are never unproblematic, in the sense that they always involve the negotiation of how the competence of a community of practice become relevant (or not) to that of another (Wenger-Trayner and Wenger-Trayner, 2015: 17).

‘Practices are like mini-cultures’, acknowledge Wenger-Trayner and Wenger-Trayner (2015: 17) and the art of navigating cultural divides—even on a micro-cultural level—is found in the making of one’s communications *relevant* to the other. There must be some effort towards ensuring interpretability: some act of conceptual translation.

‘Culture’ may not be so easily defined, but we can agree, perhaps, that it relates in part to the shared practices, repertoires, beliefs and assumptions of a particular group of people that

are also represented mentally and shape the mental representations of the culturally conspecific subjects. Communicating ‘across’ cultures requires the negotiation of meaning across a (not necessarily explicit) boundary, demarcating divergent patterns of shared beliefs, assumptions, mental representations, practices, and so on. As such, we may just as well call ‘cross-cultural’ communication ‘cross-dispositional’ (where ‘disposition’ refers to an individual’s own beliefs, assumptions, mental representations, practices and so on that accord with those of the local culture[s]). If autism may be framed as a disposition of sorts, as was outlined above in Section 1, then any communication between autistic and non-autistic people may be thought of a cross-dispositional (and akin, essentially, to being cross-cultural).

Drawing on her experiences as an autistic bilingual, Hillary (2020a: 96) has also commented on the parallels between intercultural and cross-dispositional communication:

[T]he double empathy problem was less of a problem for me in China, despite the greater difference in perspectives, because principles of cross-cultural communication were used over the idea that ‘I have a communication disorder, so this is my problem’... Using principles of cross-cultural communication over neurotypically defined ‘social deficits’ challenges models that depend on these ‘deficits’ to explain communication difficulties between neurotype.

This matches my own observations that I have found it far easier to communicate, unimpinged, when engaging in English as a Lingua Franca (ELF) communication. The next section introduces ELF, and explores how it might function as a potentially working model of cross-dispositional communication. First, however, a highly illustrative poem by Hillary (2020a), reproduced here with the author’s kind permission:

Cross Cultural Communication/跨文化交际

<i>Too blunt.</i>	太直接了。
<i>It'd be insulting.</i>	他会收到侮辱。
<i>They'd take it personally.</i>	就是个人侮辱!
<i>You can't just say that.</i>	你不可以这样说 (语法没问题, 而不够委婉。)
<i>You have to hint.</i>	暗示一下 (暗示不应该那么明显!)
<i>Be subtle.</i>	你可能需要说的委婉一些。

It was the same meaning-

Almost the same words.

It was the same bluntness-

Even the same confusion.

<i>Then</i>	<i>But.</i>
<i>I claim a cultural difference.</i>	<i>They claim a cultural difference.</i>
<i>Autistic and Neuronormative.</i>	<i>American and Chinese</i>
<i>Denied.</i>	<i>Known issue.</i>
<i>Autism doesn't get a culture.</i>	<i>The reason for today's lesson.</i>
<i>Autistic people are too blunt.</i>	<i>Americans are blunt.</i>
<i>It's because we're disabled.</i>	<i>Chinese people are subtle.</i>
<i>We need to be "fixed."</i>	<i>It's a cultural difference.</i>

美国人直接? (*Americans are blunt?*)

是可笑的! (*That's laughable!*)

自闭症者直接。 (*Autistics are blunt.*)

美国人委婉。 (*Americans are subtle.*)

中国人更委婉。 (*Chinese people are even subtler.*)

I have a communication disability.

There is a cultural difference.

This is my problem.

We can work together.

My teacher says it's different, never having listened.

She's never watched the Autistic version of this conversation.

Not that she'll admit.

(She's been the neuronormative side.)

(She thought she was only the Chinese side.)

3.2. English as a Lingua Franca

ELF is not a thing, it is a way.

(Sifakis and Bayyurt, 2018)

English has firmly established itself as the world's 'primary language for international communication' (Kinnock in Graddol 2006: 3), and particularly so for business and trade (Jenkins, Cogo and Dewey 2011). The current working figure for the number of English speakers around the world was set a decade ago at (then) around two billion (Crystal 2008: 5). Non-native speakers are now its most prolific users, outnumbering native speakers at a ratio of (at least) three to one (*ibid.*). This predominant use of English between speakers for whom it is a second language creates rather a unique language use context.

'English as a Lingua Franca' (ELF) is defined, here, as 'any use of English among speakers of different first languages for whom English is the communicative medium of choice, and often the only option.' (Seidlhofer 2011: 7). This definition allows for the inclusion of a native English speaker within the mix. There have, of course, been numerous lingua francas in use around the globe at various points throughout history, yet what sets ELF apart from these, and those other languages still used as lingua francas today, is the vast breadth of its geographical spread, and its use across a multiplicity of domains (Jenkins, Baker, and Dewey, 2018).

ELF is best thought of as 'a communicative mode or situation, rather than a linguistic system that may be learned' (Hall, 2018:75). Although most certainly not a variation of English in the typical sense in the way that *Chinglish* (Chinese English) and *Singlish* (Singaporean English) might be, ELF does appear to possess its own identifiable qualities. Numerous ELF corpora have been compiled in recent years, and a significant body of research has now been conducted, with analyses converging on some common characteristics.

What is interesting about ELF, for these purposes, is its role as a functioning mode of communication across differing 'dispositions'. What is it about the way English is used in these liminal encounters that facilitates this mutual understanding? Can anything be gleaned from the successes of ELF and applied to further cross-dispositional communication, such as that between autistic and non-autistic people? First, however, so that we may better understand what it is we're dealing with, a more in-depth look at some of the defining features that constitute ELF is required.

3.2.1 ELF characteristics

ELF is used across a range of contexts (e.g. business, academia, social purposes) between speakers who do not share a first language. Being so ‘intrinsically intercultural’ (Pullin 2015), ‘common ground cannot be presumed and diversity needs to be negotiated locally’ (Cogo, 2009: 254). In other words, the differing cultural associations and sociolinguistic repertoires that are brought to bear on ELF interactions must be consciously, and often ostensibly, navigated.

ELF, then, is often described as ‘non-normative’ (in that it does not adhere strictly to the syntactical, lexical, phonological or pragmatic norms of standard English variations), ‘fluid and flexible’ (i.e. rules and relative norms evolve with interaction), ‘co-constructive’ and ‘listener-orientated’ (Jenkins, Cogo and Dewey, 2011). Above all, ELF has been found to be consensual and cooperative in nature (Firth, 2009; Jenkins, 2000, 2006; Pullin, 2013; Seidlhofer, 2011). In *not* being able to draw on shared resources, successful ELF users develop an ability not only to ‘mediate between [the] world of origin and world of encountered difference’ (Young and Sachdev, 2011: 83), but to occupy a third, emergent (inter-)cultural space, referred to by Young and Sachdev as a ‘relativising C3’ (2011: 83): or third culture.

Of the various ELF characteristics identified as helping to achieve this degree of ‘comity’ (Pullin, 2013), it is arguably *accommodation* that is the underlying, driving process of ELF talk. Grounded in Communication Accommodation Theory (CAT: Giles, 1973; Giles and Ogay, 2007), accommodation is the bilateral process of speech adjustment—by both listener and speaker—seeking convergence for the purpose of being understood (Jenkins, 2000: 21). According to the basic principles of CAT, as well as mutual understanding of referential information, ‘salient social category memberships’ (Giles and Ogay, 2007: 294) are negotiated during communicative interaction. Communicative strategies of *convergence* or *divergence* (adjustment of one’s speech towards that of your interlocutor either positively or negatively) are used to ‘signal their attitudes towards each other and their respective social groups’ (*ibid.*). Within ELF communication, three directions of convergence have been noted; converging on one another’s forms, converging on a ‘target-like’ form and avoiding certain (usually idiomatic, NS) forms (Jenkins 2006: 45-7). In the first case, where users

converge towards each other's forms, 'errors' and 'mispronunciations' may be perpetuated for the purpose of maintaining mutual intelligibility.

In one of earliest pieces of pragmatic research on ELF, Firth (1996) identified its consensus-orientated nature, and the tendency towards preventative measures to protect against potential misunderstanding, as opposed to more traditional repair or reformulation behaviours. Provided that a certain, basic threshold of understanding was achieved, ambiguities or linguistic infelicities were seemingly otherwise ignored: a phenomenon Frith termed the 'let-it-pass principle'. ELF users, he found, were demonstrating a 'remarkable ability and willingness to tolerate anomalous usage and marked linguistic behaviour, even in the face of what appears...to be usage that is at times acutely opaque (Firth, 1996: 247). Based on specific, 'quintessentially *local* considerations' (Firth, 1996: 243), participants were choosing whether or not to attend to the anomalies in the unfolding interactions. Where the lack of understanding (in either direction) was deemed insignificant to the main aims of the communication, they were simply not acknowledged.

While there have been some contradictory results in more recent research suggesting that the let-it-pass principle may not be as prevalent as first thought (e.g. Cogo and Dewey, 2006: 66), it remains an interesting occurrence. In its reduced demands for felicitous and fully coherent utterances, it is reminiscent of the findings in Heasman and Gillespie's (2019) work on autistic intersubjectivity (see Chapter C, Section 3.2). In the latter study, Heasman and Gillespie (2019: 910) had found that in their autistic group interactions, 'a low demand for coordination' meant that seemingly odd utterances, where the meaning was not apparent, did not disrupt the overall flow of conversation. The autistic participants were letting it pass.

In both instances, communication is successful (in the sense that it does not break down, and its social, perlocutionary functions are achieved), yet it seems to, at times, rely on interlocutors performing some kind of cognitive suspension. How can this, and other aspects of ELF communication, be explained in terms of relevance theory?

3.3 Relevance theory in ELF and non-norm-anchored communication

Particularly in terms of the let-it-pass phenomenon, ELF users seem to be *somehow primed* to readily adjust the extent to which they do or do not make additional efforts, dependent on the context, and to do so more generously. This may be expressed in something like the following way:

- (a) Following a relevance-driven comprehension procedure, ELF user Paulo will assume optimal relevance of his ELF interlocutor Khalid's ostensive stimulus, even when Khalid's utterance is not immediately intelligible.
- (b) Paulo will augment Khalid's utterance with contextual effects and search for a relevant interpretation that produces the most positive cognitive effects for the least cognitive effort.
- (c) At a certain critical point, cognitive efforts may begin to outweigh potential cognitive effects. However, manifest to Paulo is the fact that this is ELF interaction.
- (d) Paulo evaluates the utterance in the surrounding communicative context. If the utterance can be skipped with little damage to the global flow of the conversation, Paulo ends his search for relevance and lets it pass

In norm-anchored interaction—between two attuned speakers of a shared first language and culture—this final stage (d) will not ordinarily occur. Human cognition, according to the Cognitive Principle of Relevance (Sperber and Wilson, 1986), is orientated towards achieving maximum cognitive effects for minimal cognitive efforts. Based on the presumption of optimal relevance, an individual will assume any act of ostensive-inferential communication to have intended some 'interpretation that will justify the expenditure of processing effort in accessing it' (Clark, 2013: 35). The receiver of any ostensive stimulus will, therefore, continue to search for a relevant interpretation up to a point where they either reach a satisfactory result, or are forced to seek additional, clarificatory information.

It may be that in the instances of reduced demand for coherence found across autistic group interactions (Heasman and Gillespie, 2019), a similar heuristic is at play. But why might that

be so? In both cases, speakers are adjusted to interacting within contexts where incomprehensible ostensive stimuli abound. In an ELF communicative context, speakers will regularly encounter linguistic forms that may be indecipherable: on account either of production error (on phonological, lexical or syntactic levels) or of the receiver's own reduced linguistic knowledge (i.e. lexical items or linguistic forms they are as yet unfamiliar with). They will also surely have experience of being the speaker whose utterance is not understood, again, for either of the above reasons. Given the frequency of these events, and the perlocutionary import hanging on the interactions (e.g., to save face; to achieve work-related goals; to build affective ties), an additional 'evaluation and filtering' stage during the processing of an utterance seems necessary.

Not all non-native speakers of English demonstrate the interculturally-communicatively-competent (Byram, 1997), consensually-orientated skills of the ELF speaker. There is something very special about how English is used in the lingua franca context. That said, not all ELF speakers will demonstrate these skills, and certainly not all of the time. It involves an attitude of receptivity and openness reflected in communicative and cognitive strategies that must be developed, assumedly, over time. In the same way, it is likely that not all autistic people will demonstrate these skills (and at all times): but they certainly have the incentive to develop them, in order to 'survive and potentially thrive in a non-[autistic] culture' (Milton, 2012b: 886).

For autistic individuals, if it is the case, as argued in Chapters X, Z and C, that their designations of relevance do not readily match those of the non-autistic people around them, they too will be encountering ostensive stimuli that may not appear immediately relevant or coherent. In order to facilitate smooth social interaction, isn't it better to laugh at the joke you don't understand when you do understand a joke has been made if its meaning is (probably) inconsequential and to not laugh might (a) offend the joker and (b) out yourself as a member of an outgroup who doesn't share these associations? What if the joke-maker has some social power over you? For children diagnosed as autistic there is the gamut of speech therapy, or applied behavioural analysis (ABA) sessions where socially 'appropriate' behavioural responses are drilled, regardless of intrinsic meaning to the autistic (e.g. Harte, 2019; Sandoval-Norton and Shkedy, 2019). There are myriad reasons why it may be

beneficial to develop the ability to skip over incomprehensible and seemingly inconsequential utterances and let them pass.

One further ELF strategy, aside from letting-it-pass, that may benefit from further exploration, is accommodation. According to the principles of CAT, all speakers adjust their communicative style in response to the perceived needs and social (group) status of their intended interlocutor (Giles and Ogay, 2007). A central premise of CAT is that communication mediates and maintains not only interpersonal relationships but also *intergroup* ones too (Gallois and Giles, 1998). In other words, prior assumptions about the social group to which an interlocutor belongs will be brought to bear on the interaction.

A core characteristic of ELF communication is its typically consensual nature, with local norms emerging and being perpetuated throughout interaction. Within these encounters, multiple identities and social group memberships are at play simultaneously; professional roles and hierarchies; cultural and national stereotypes, which can be positive, negative and neutral; gender; race; and degree of cultural capital (Bourdieu, 1986). In addition to all of these there is also a mutual awareness of shared identity, which is related to Young and Sachdev's (2011) 'C3': of being an 'ELF speaker'.

The generous assumption of common ground that characterised the distinct neurodivergent (autistic) intersubjectivity observed in Heasman and Gillespie's (2019) study, may be based on a similar recognition of some shared identity: in this case being autistic. Like the ELF identity, in-so-far as such may be loosely assembled, part of what an autism diagnosis entails is being *outside* of the norms of the immediate language of the interactions. Whilst individual autistic maps of salience and communicative habits may vary distinctly (see Chapters X and C)—meaning that any two autistic speakers may have drastically different dispositions—non-norm-anchored speakers may mutually recognise each other as such. A *generosity of interpretation* may be resultingly triggered: characterised, perhaps, by a broader search for potential, relevant interpretations based on a locally emergent 'C3' intercultural context. In other words, fewer assumptions about mutual manifestness are made and expectations for references to things outside of a shared cognitive repertoire are increased. Speakers may be more prepared and more willing to make extra efforts to identify relevance (or, as described above, to simply 'let it pass').

This generosity of interpretation may also describe successful cross-dispositional communication. It may explain what is taking place when, as Sterponi and Fasulo (2010) described (see Chapter C, Section 3.1), interlocutors dare to ‘go on’ with one another, or when ‘language is set free and allowed to run along the very edges of meaning’ (Sterponi and Fasulo, 2010: 135), yet mutual understanding is still achieved. My intuition is that this mode of operating is one that can be ‘switched’ on when a communicator recognises that they are engaged in a C3 interaction. Crucially, then, a communicator must be (a) aware that the communication is cross-dispositional and (b) be motivated sufficiently towards its success to commit to engaging in the (potentially) more effortful processing required. In ELF interactions, both of these conditions are usually easily fulfilled. In the case of cross-neurological communication between autistic and non-autistic people, neither are guaranteed.

4. Conclusion: conversing in the borderlands

The boundary becomes a place from which something begins its presencing in a movement not dissimilar to the ambulant, ambivalent articulation of the ‘beyond’.

(Bhabha, 1987: 5)

In Walsh, Delmar, and Jagoe’s (2018) co-produced narrative account documenting the journey of an autistic woman through speech and language therapy ‘the figurative notion of *borderland*’ is utilised ‘to describe a physical and psychological space characterized by a more flexible, informal, and authentically shared therapeutic relationship, influenced by a merging of cultures (Walsh, Delmar and Jagoe, 2018: 108). The *boundary* or *borderland encounter* is a rich metaphor for interactions over the distance borne of difference and one that is often used when describing such instances (such as in Wenger-Trayner et al. 2015). When we communicate cross-dispositionally, we are *talking between worlds*. If we do it

right, a third world opens up: one populated by objects of the known and the ‘other’ world, sometimes blended together and made anew. It is more than translation. It is the work of the shaman, the artist, the alchemist. It is borderland work.

In her book entitled ‘Borderlands: La Frontera’, Anzaldúa (1987)—a lesbian, self-identified ‘mestiza’, bilingual Chicana growing up at the Texas-U.S Southwest / Mexico border—describes her experience not of being ‘other’, though she undoubtedly was, but as being ‘a border woman’:

Culture forms our beliefs. We perceive the version of reality that it communicates. Dominant paradigms, predefined concepts that exist as unquestionable, unchallengeable, are transmitted to us through the culture. Culture is made by those in power. (Anzaldúa, 1987: 38)

Not only [is] the brain split into two functions but so [is] reality. Thus people who inhabit both realities are forced to live at the interface between the two, forced to become adept at switching modes (Anzaldúa, 1987: 59).

Anzaldúa’s experience as a woman straddling numerous minority identities was of a person constantly moving through the liminal contact space of sometimes ill-matching worlds. It was not simply a cosmetic clash of cultural norms that she experienced, but a disconnect of mismatched realities that required the delicate work of assemblage. The two modes that she refers to (above) are reminiscent of the divide between the normatively-orientated ‘masked’ self (Holliday Willey, 1999; Hull et al. 2017; Lai et al. 2017) and the often socially-eschewed unmasked self that autistic people often experience.

Along the edge of any two fabric squares, joined together in a patchwork quilt, there is the stitching. It is not just two scraps aligned side-by-side—though it may appear so on first glance—but a coalescing of three: the square, the square and the thread-work. Through the process of being combined, the squares become more than the sum of their parts. They are

(part of) a quilt, and the thread is both the physical trace of this becoming and its representation. The quilt is Bhabha's (1994) *third space*, and the thread the way to get there.

To move into a third space, to enter the borderlands, takes energy. It requires effort—cognitive effort—and awareness of the need to do so. As it is so often the minority subject who first suffers from the mismatch of realities, it tends to fall to them to take on the extra work of reconciliation. For the individual whose disposition is discordant with that of the approved majority, there is a greater imperative to bridge the gap: to not be left misunderstood, to not be overlooked, to be heard. In cross-neurological communication, it is the autistic who is expected to adapt to the norms of the society within which they participate. It is they who must make, or be willing to make, the extra cognitive efforts in order to blend, and have their needs met.

Magic, according to American philosopher and cultural ecologist David Abram (1996) is 'the experience of existing in a world made up of multiple intelligences' (Abram, 1996: 9), with the shaman slipping 'out of the perceptual boundaries that demarcate his or her particular culture' (*ibid.*), to enter into relation with other intelligences. In our modern world, we are at once intensely aware of the existence of others—at least partly through the prevalence of digital connectivity—and simultaneously increasingly polarised in our sense of cultural *uses* and *thems*, on ever atomising and multiplying levels. Loneliness—ethical loneliness—gnaws at our species like a cancer. Perhaps 'magic', as defined above, is a skill we should be aiming towards cultivating. We do live in a world populated by 'multiple intelligences', with multiple ways and multiple dispositions. Taking this awareness more mindfully into our interactions may allow communication to run, more fluidly, along the very edges of meaning, so that we may share the effort of conversing in the borderlands.

Chapter M: Methodology

‘Methodology’ can be something of a dirty word. It can evoke a dry, formulaic and dispassionate framing of research: the dusty Bunsen burners stacked high in the corner of a much-loathed classroom; multiply abstracted charts and diagrams bearing little relation to the phenomena that had originally sparked curiosity. And yet, approached carefully, methodology can be so much more than that. It can imbue research with a sharp sense of purpose. It can add clarity to aims and interpretation of results. At a certain point methodology can become manifesto.

Autism research is an incredibly contentious field. There are many conflicting ways of conceptualising what autism is (as discussed in Chapter X). In addition to this, the topic is an emotional one for many stakeholders. The further I have progressed down the path of completing this doctoral work, the more apparent it has become to me that I cannot separate the personal (my own autism) or the political (how autism and autism research is received and approached in the wider world) from the raw ideas and data of this thesis. As an (autistic) autism researcher I feel I have a responsibility to ensure my actions are considered and accountable and clearly explained. For that reason, this chapter has been given a little extra room to breathe, with space allowed for each calculation along the way to be made visible.

Section 1 outlines the foundational methodology behind this empirical research. Section 2 describes the design and specific aims, while Section 3 details the methods undertaken to acquire and analyse the data. Some of the ethical issues that arose in the undertaking of this project are addressed in Section 4, and in Section 5 the important matter of data credibility is discussed. What began as a goal-orientated task (to obtain naturalistic conversational data), evolved into something larger than this PhD thesis, bringing together strangers from around the city to share their experiences of loneliness. At a moment in time when the

country has been cut so many ways,³⁴ and so deeply, by seemingly insurmountable divisions, it was a humbling and affirming experience to see people—from very different walks of life—meet and talk kindly. We are, all of us, human. We all have that human desire to connect, to have a voice, and to be heard.

1. Grounding the research

This thesis research operates within an interpretivist paradigm, as is hopefully clear from the ideas and theories presented in the preceding chapters. Central to the interpretivist approach is a foregrounding of subjective experience. Individuals are seen as mediators of their reality, constantly interpreting a chaotically evolving external world (Williamson, 2006): tenets which are ontologically highly compatible with the theories of predictive mind, enacted and embodied cognition and participatory sense-making that were explored in Chapters X and F and have provided the foundations for the central hypothesis of this thesis.

This research has been wholeheartedly interdisciplinary since the outset. When handling such expansive constructs as ‘communication’ and ‘autism’, a broad-stroke approach really is very useful (as argued in the thesis Introduction). But, a diverse array of influences should not entail a piecemeal methodology. Methodology directly reflects the way in which a researcher makes sense of the world. Without clarity about how we’re carving up reality, any interpretation of results becomes a lot more challenging, or certainly less robust. In cases, such as this, where participants have been asked to contribute their time to research, it is even more important to ensure that any potential results arising from the study cannot be discredited through lack of soundness.

³⁴ The data collection phase took place during the build up to the UK’s exit from Europe (‘Brexit’), during which time the country was experiencing increased, vocal polarity.

1.2 Ethnographic methodology

The primary methodology underpinning this research is, arguably, a type of ethnography—although the reasons for this may not be immediately obvious. Originally an off-shoot of anthropology, ethnography’s beginnings were colonial, with researchers decamping to far-flung, foreign civilisations to steep themselves in ‘other’ primitive or exotic worlds. Since then the scope of ethnography has broadened considerably, and it too has seen its own sub-branches evolve. ‘Linguistic ethnography’ amalgamates the core, interacting areas of interest of the constituent disciplines, namely ‘how social and communicative processes operate in a range of settings and contexts’ (Snell, Shaw, and Copland, 2015:1).

One interesting apparent difference between linguistic ethnography as it has evolved within the UK and more traditional, anthropological ethnography, is ‘an overall shift from the inside moving outwards, trying to get analytic distance on what’s close-at-hand, rather than a move from the outside inwards, trying to get familiar with the strange’ (Rampton, 2007: 590- 591). In anthropological ethnography, the traditional aim has always been to ‘make the strange familiar’ (Hymes, 1996: 4-5). Researchers were required to ‘lurk’ and ‘soak’ (Werner and Schoepfle, 1989) in the target community, not just as observers but as a *participant-observers*, for a considerable time. Whilst in linguistic ethnography the need to subsume oneself (to some extent) in the culture under scrutiny remains, the emphasis seems to be, instead, on ‘making the familiar strange’ (Snell, Shaw, and Copland, 2015: 7).

There is something potentially radical about this approach that suits the aims of this thesis particularly well. The common narrative is that autistic people are the ‘strange’ ones and from this develop all sorts of biases and barriers (recall the negative thin-slice judgements formed by non-autistic participants about their autistic counterparts in Sasson et al., 2017, above in Chapter X). Linguistic ethnography flips this and instead aims to cast societal and communicative norms—and the potentially misleading assumptions they engender—as what is ‘strange’.

The use of an ethnographic approach to the investigation of autistic language use, or autistic sociality is not new (see Sterponi, and de Kirby, 2016; and research emanating from the Ethnography of Autism Laboratory at the University of California, e.g. Ochs and Solomon, 2010; Solomon, 2008). Ethnography functions, in these cases, as a direct counter to the

clinical stance traditionally taken in autism research. Autism is concertedly approached ‘more as an experience and a way of being in a social world and less as a disorder in need of an intervention’ (Solomon, 2008: 150), and as such is a bold statement of intent.

1.2.1 Autoethnography

Autoethnography, a further subdivision, involves the researcher studying ‘their own people’ (Hayano, 1979: 99). It takes an emic view (as opposed to an etic one) whereby the research takes place from a subjective, insider position as a member of the ‘folk’ (from ἔθνο; ethno) being researched.³⁵ ‘Analytic autoethnography, according to Anderson (2006), is that research ‘in which the researcher is (1) a full member in the research group or setting, (2) visible as such a member in published texts, and (3) committed to developing theoretical understandings of broader social phenomena.’ (Anderson, 2006 : 373).

The emancipatory capacity of an ethnographic approach to autism-related enquiries is perhaps one reason why it has been adopted by numerous autistic scholars as a tool for exploration, in the form of auto-ethnography (or ‘anti-ethnography’: see Rose, 2005).³⁶ In autism research especially, autobiographically-driven auto-ethnography allows for the tacitly-acquired, ‘specialist expertise’ (see Milton, 2014a) of (an) autistic subjectivity to be mined for the rich information it already, uniquely includes. In this way, some authority over knowledge production is reclaimed, and it avoids the ‘fish-bowling’ effect of being ‘a “subject” for others to ponder over’ (Moon in Milton and Moon, 2012: 36).

Central to autoethnography, more generally, is researcher reflexivity (Denzin, 2013; Ellis, 1999; Ellis and Bochner, 2000; Hughes and Pennington, 2016; Short, Turner and Grant, 2013). Autoethnography typically comes as narrative, and in its telling, it is also showing.

³⁵‘Folk’ seems a more suitable term than ‘culture’, which carries a lot of baggage with its various connotations.

³⁶ E.g. see: Hughes, 2012; Hillary, 2020b; Milton, 2014c; Prince, 2009; Walker, 2019; Yergeau, 2017; and an appendix of fifty-four pieces of reflexive autistic autobiographic writing attached to Rose, 2005.

Evocative literary language conjures the subject(s) to life for the reader and moves them, whilst at the same time conveying ethnographic observation, data, and fact (Denzin, 2013). A creative use—rather than a formalised academic use—of language is used to convey what might be thought of as ‘descriptively ineffable emotional meanings’ (Wharton and Strey, 2019: 254) and (hopefully) to augment the theoretical argument through the activation of affective effects. A richer, more poetic depiction of ideas and fact allows for a wider array of meaning to slip around the edges of words, bringing the reader closer to the object of study.

Performance of self (or the ‘vulnerable self’: Ellis 1999: 669), in its critical reflection of the personal, often leads the way to the radical, or the transgressive (Denzin, 2013).

Writing about how identities are compromised by the dominant cultural meanings, at odds with subjective and relational experiences of the world, gives the lie to the often taken for granted master narratives about how life is or is supposed to be (Short, Turner, and Grant, 2013: 4).

The themes of researcher reflexivity and transgressive form seem to go hand in hand. Gustafson, Parsons and Gillingham (2019: 25), working in the field of participatory sociological research, note that scholarly writing conventions are often directly ‘at odds with the epistemic stance and discursive claims’ of the critical researchers who are making them. During their study investigating the experiences of lone mothers living in poverty, these researchers found that the participating mothers’ voices were subtly undermined by the processes of academic publication (such as through the edits imposed by journals or the very form of the article). Their conclusion, in this paper, was that ‘writing to transgress’ [in whatever form that may take] ‘can challenge the power-knowledge production nexus posed by traditional writing practices.’ (*ibid.*).

Bertilsdotter Rosqvist et al. (2019) also call for continued researcher reflexivity throughout the full research process when undertaking autism research, and emphasise that ‘academic systems (such as the writing of articles...) can be a barrier to the inclusion of autistic voices’ (2019: 2). This mirrors what has been discussed elsewhere when evaluating participatory

methods and accessible dissemination (see above, this chapter). Shifting towards an artistic ‘practice’ as both method and output (e.g. Ellis, 2004; Francis, 2010) is one way that Bertilsdotter Rosqvist et al. (2019) suggest as a means of transgressing the form and removing said barriers. Creative ethnographic writing (e.g. fiction, creative non-fiction, poetry), the like of which can be found in journals such as *Anthropology and Humanism*, and the *Journal of Contemporary Ethnography*, may offer one such means of communicating the essence of research in a more egalitarian way.

This thesis is not autobiography. It is a case study of a number of autistic adult participants of whom I am not one, rooted in rigorous engagement with the current literature. However, it does undoubtedly draw on my membership to the larger group whose language use I am investigating. My hope is that this more personal situatedness, will, as Hayano (1979:101) argued, ‘be [an] asset to deepen ethnographic understanding’.

2. Methods

The practical aspect of this thesis takes the form of an ethnographic case study (more on case studies; Section 2.2., below), focusing on a set of eight core autistic participants recruited through local autism support charity, Assert (also acting as gatekeeper). Assert is a member led organisation, founded in 2002, that supports autistic people traditionally identified as being ‘high functioning’, or having Asperger’s Syndrome, along with their family members, partners or carers. It offers a range of services including a monthly social drop-in, case-work, support in accessing government or local council benefits, educational and life-skills courses to empower autistic clients and autism awareness-raising training for local organisations.

Each of the core participants (‘A’s) engaged in three different dyadic conversations of approximately ten minutes each, comprising three different scenarios. The first conversation involved the core autistic participants talking with a familiar, self-chosen conversation partner (e.g. family member, friend: ‘X’s); the second conversation paired up a core autistic participant with another, unfamiliar, autistic core participant; and the final conversation matched core autistic participants with unfamiliar, non-autistic individuals (‘B’s) recruited

through the University of Brighton, all taking place in March 2019 at the Assert premises in the centre of Brighton. A follow up, sense-making and results-sharing meeting was scheduled for six months later, at the same venue, where core autistic participants were invited to come together to discuss the initial findings and their experiences of taking part (see 3.1.5, below).

2.1 Aims of the research

2.1.1 Hypotheses

The primary aim of this empirical work was to test the explanatory power of the following hypotheses, derived from a synthesis of relevant theories and a review of the literature:

1) Relevance theory—and specifically the relevance theoretic notion of mutual manifestness—can make sense of what is happening on a cognitive level during the breakdowns in mutual understanding between autistic and non-autistic individuals, otherwise known as the ‘double empathy problem’.

- 1a) These breakdowns can be explained in terms of being a ‘cross-dispositional’ problem.
- 1b) A relevance theoretic account of these breakdowns directly challenges the long-standing characterisation of autism as a condition of impaired ToM.

Due to the need to obtain naturalistic data, it was important to generate and facilitate conversations that were uncontrived. In addition, in making the data-collecting activity meaningful in its own right, the research project could become a mutually beneficial endeavour to both myself as researcher, and to the participants; a cornerstone of participatory

and community-based research (Chown et al., 2017; Elson, Wamucii, and Hall, 2018; Fletcher-Watson et al., 2019; Milton and Bracher, 2013). As such, the data collection process evolved into its own engaged research project, ‘Talking Together’, with its own set of sub aims, described below.

2.1.2 Sub-aim: the Talking Together project

Around the time of the research design, BBC Radio 4 began broadcasting a series of programmes called The Anatomy of Loneliness, presenting the results of the BBC Loneliness Experiment. The experiment took the shape of a large-scale survey, completed by 55,000 people over the age of 16, co-run by researchers from the University of Manchester, Brunel University London and Exeter University and supported by the Wellcome Collection. The questionnaire asked people what they thought loneliness was, when they felt lonely and for how long. Surprisingly, the highest levels of loneliness were reported in younger respondents (16-24 age group) with 40% feeling lonely, compared with only 27% of older respondents who had completed the study (BBC Radio 4, 2018).

As discussed in Chapter C, loneliness is a significant problem for autistic people. The Jo Cox Loneliness Commission—a cross-party commission resulting in MP Tracey Crouch’s appointment as the new Minister for Loneliness in January 2018—reported that 50% of disabled people will be lonely on any given day (2017: based on data from Sense charity). Given this, and the fact that the non-autistic participants recruited to the B group would likely belong to the 16-24 demographic, it was decided that conversations should be structured around the topic of loneliness (in Brighton and Hove), based on the belief that this would create the opportunity for meaningful interactions.

For each of the three conversation pairings, a (different) set of two prompt questions (see Appendix 9) were provided in order to give the participants somewhere to begin, although it was explained that the questions were to function only as a guide and that it was not necessary to answer them directly. Prompts were designed to elicit personal experiences of loneliness, thoughts about loneliness in Brighton and Hove more specifically and to invite ideas around how to address those problems within the city. Starting a conversation with

anyone, taking time to think about why you were lonely and telling someone else that you feel lonely were three of ten strategies identified within the BBC Loneliness Experiment to combat loneliness (BBC Radio 4, 2018). An additional hope for this research, then, was that engaging in these conversations may contribute towards a minimising of participants' own experiences of loneliness, and may function as some form of 'world-building' (Stauffer, 2015).

It was only once the first stage of the Talking Together project had begun and the first conversations had been had, that its potential significance as a piece of impactful engagement really became apparent. The Public Engagement Evaluation Toolkit—devised by Queen Mary University of London, Fast Track Impact, the National Coordinating Centre for Public Engagement (NCCPE) and Dialogue Matters (see Reed et al., 2018)—underlines the importance of impact and output evaluation in within engagement (research) activities. As such, once its value as an engagement activity in and of itself had been identified, an invitation to provide feedback, by email, on the experience of participating was added on to the end of this first stage, with the aim of (re)capturing some of the positive responses expressed at the time (as well, of course, as any negative or neutral feedback).

The Talking Together project was set up so that these conversations constituted its first stage, functioning as a kind of community consultation pilot, with a possible second stage—whereby participants could be supported to put the ideas for tackling local loneliness, generated in the conversations, into action—to come later. Research by Cattani et al. (2005), evaluating the efficacy of interventions for social isolation and loneliness in the elderly, found that involving participants in the 'planning, developing and delivering of activities' proved the most effective strategy (2005: 62) and this participatory ethos was behind the design. Participants in Talking Together were advised that a second, social enterprise stage enacting the ideas discussed in the Stage One conversations would be contingent on later funding being acquired (none was available through the university at the time), and at a later date (if at all). Participants were given the option to opt-out of being contacted in the future should funding and opportunity arise.

2.2 The case study approach

Case studies are pieces of research that ‘investigate a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident’ (Yin, 1994: 13). This research can be described as a case study in that it analyses, in close detail, the language use of a small set of individuals (eight core participants) across several interactional contexts. Gillham (2000: 1) defines ‘case’ as:

- a unit of human activity embedded in the real world;
- which can only be studied or understood in context;
- which exists in the here and now;
- that merges in with its context so that precise boundaries are difficult to draw.

Case studies—the investigation of the above in relation to a specific (or set of specific) research aim(s)—are most commonly thought of as generating interpretivist results, and associated with inductive theorising, based on emergent data (Gillham, 2000). In this sense, case study research tends to primarily be hypothesis-seeking rather than hypothesis-testing. To initiate case study research with pre-formed hypotheses may seem at odds, then, with the tenets of its central methodology. However, Cavaye (1996) reminds us that although less common, case studies can be used for testing or building theories. In the instance of theory testing, theoretical propositions are derived from the theoretical model, and ‘in the analysis stage, the factual conditions and relationships are compared to the theoretical one’ (Cavaye, 1996: 235). Løkke and Dissing Sørensen (2014) describe what they call the concept-driven research path in case study research, with the research goal being to understand the explanation(s) underlying phenomena, with the outcome a test of the theory’s explanatory power (2014: 67). This is the pathway the empirical part of this thesis has sought to follow.

Linguistic-ethnographic case studies, according to Snell, Shaw and Copeland (2015), additionally include the following characteristics; combining linguistics with ethnography;

adopting an interdisciplinary approach to research; and aspiring to improve social life (2015: 5). This work, I believe, features all of the above.

3. Design

3.1 Data collection

3.1.1 Participant recruitment

The participants fell into three different groupings. Group A were the core set of eight autistic participants (originally ten, but two withdrew on the day due to ill health), recruited through local autism charity, Assert. Assert provides support, education and social activities for ‘adults with Asperger Syndrome or High Functioning Autism’ (<https://www.assertbh.org.uk/>) in the Brighton and Hove local area. As such, all potential participants would be people using speech as their primary mode of communication in their daily lives, and purposively sampled (Jupp, 2006). Initial contact was made via email by an Assert staff member, first to clients they had worked with most recently, and then via the main client mailing list. A short introduction to the project (that I had prepared) was included in the initial email and those who were interested were asked to visit the linked-to recruitment webpage (see Appendix 1). The webpage was designed for simplicity, and invited interested parties to contact me by email, providing their contact details and the answer to two questions; ‘do you have a formal autism diagnosis?’ and ‘have you been involved in research in the past three months?’.

Increasingly, autistic individuals are receiving their diagnoses later in life, despite autism being present from (at least) birth. As such, it is widely understood that there exists ‘a lost generation of people who were previously excluded from a diagnosis’ (Lai and Baron-Cohen, 2015) often exacerbated by the misdiagnosis of women in particular (*ibid.*), whose masking behaviours (see: Hull et.al., 2017), in addition to diagnostic biases, made them harder to detect. And yet achieving a diagnosis of autism in adulthood is not easy. In one study, conducted by the Social Care Institute for Excellence (n=59), only 19% of participants diagnosed as autistic in adulthood found accessing an adult diagnosis ‘easy’; with 81%

describing it as ranging from ‘quite difficult’ to ‘not possible’ (Taylor and Marrable, 2011:18). Anecdotal experiences of attempting to access adult diagnosis shared by autistic adults via social media seem to back this up. As a result, there is current debate within critical autism studies around whether diagnosis can even be considered scientifically valid (Woods et al., 2018).

In view of this, stipulating that participants must have a formal autism diagnosis seemed unnecessarily limiting. However, in order to add the results of this study to the wider literature surrounding autism research in a meaningful way, participants would be required to have a formal diagnosis of autism. This was one of several points throughout the data collection design process where it felt like the world of research and the world of the researched community were slightly at odds. Eventually it was decided that information pertaining to diagnostic status would be collected based on the self-report of having received a formal diagnosis. All respondents reported a diagnosis of either ‘autism level 1’, ‘autism spectrum condition’ or ‘Asperger’s syndrome’: the various terminology reflecting the differing times at which they received their diagnosis. The second question on the webpage, relating to involvement in recent research, was so as to avoid the research fatigue that some over-researched, vulnerable participant groups can experience, as was suggested by the University of Brighton research ethics guidelines.

Once participants had contacted me, they were sent the participant information sheet (Appendix 3). The information sheet had been designed with accessibility for autistic people in mind, drawing on my own insights into autism and the advice provided in the Participatory Autism Research Starter Pack (Pellicano et al., 2017). White space and plain English were used, as well as images and a photo of me, as researcher. Participants were asked, in the information leaflet, to select somebody they knew well and felt comfortable talking with to bring along for the first recorded conversation. Having confirmed their interest and had the opportunity to ask any questions, participants were offered five possible sessions for the conversations and asked to respond with their preferred time slot.

The second group, Group B, were recruited through the University of Brighton; in the first instance via email to current cohorts of undergraduates and postgraduates enrolled on English courses, and when more participants were still required, via an email sent to the School of Arts and Humanities. The call-for-interest emails included a link to a (different,

but similar) webpage (Appendix 2) providing initial information about the Talking Together research project and asking interested parties to respond, informing me of their contact details and whether they had been involved in research in the past three months (see reasons above, Group A). In a similar procedure to that for Group A above, participant information sheets (Appendix 4) were emailed out to respondents. Following confirmation of interest, an email was sent to selected participants (one respondent was excluded on account of her having an ADHD diagnosis and being on the waiting list for an adult autism diagnosis), inviting them to choose from the five available sessions for their conversation(s).

Due to the recent research pointing to young people (aged 18-24) reporting high levels of loneliness (see above, 2.1.2) the original aim had been to recruit participants to Group B that belonged to that age bracket (so that the Talking Together project might bring together two stakeholder publics). It soon became apparent that excluding interested respondents from participating in conversations about loneliness was somewhat mean-spirited. Furthermore, because this was a small-scale study, an age constraint on an already small participant pool would not make the data any more representative of a large population. The restrictions on age, though mentioned in the participant information leaflet, were removed in practice, meaning that a couple of the eventual Group B participants were a little older than originally anticipated (B4 was in her early 30s, B4 was a mature student in her 40s).

The final group, Group X, comprised the familiar, chosen conversation partners as selected by the Group A core participants. No direct contact between Group X participants and myself occurred until we met on the day of the scheduled conversation. Group A core participants were asked, in their information sheets, to share the information sheet with their chosen conversation partner prior to attending and copies of both versions of the information leaflets (A and B- Appendices 3 and 4) were available on the conversation days in printed form.

3.1.2 ‘Talking Together’ Stage One (data collection) Procedure

Five sessions were scheduled over three days—two Friday mornings and afternoons and a Tuesday evening—so as to make the Talking Together project accessible to as many people as possible. In each session, a series of five conversations took place; (1) a core autistic

participant A with their chosen partner X; (2) a further A with their chosen X; (3) both core As together; (4) the first A with a B (unfamiliar, non-autistic) participant; and (5) the second A with a B participant—in some sessions there was a different B participant for conversations (4) and (5), in others the B participant had two conversations (see Table 1, below, for a visual aid of the conversation pairings). The conversations were scheduled for every 20 minutes, with this arrangement meaning that each core A participant only had one 20-minute wait between conversations. Conversations took place in a small private meeting room at the Assert premises, just along from the communal waiting room where participants and their familiar partners could wait, talk, rest and have refreshments.

On arrival, all participants were asked to sign the consent forms (Appendices 5, 6 and 8, for groups A, B and X respectively). These had been sent ahead by email to Group A and B participants, accompanying their individual time-slots, in order to allow time to read and digest. The information sheets sent out with the consent forms detailing the procedure of the study were also available for review. After their final conversation, all B participants were taken to one side before they left and provided with a second consent form (Appendix 7). This explained that a previously undisclosed key aim of the study was to investigate how different types of people establish and maintain common ground in conversations and as such, some of the conversation partners in this study were autistic. It explained that this aim had been initially veiled so as to mitigate any potential, unintentional modifications of their natural speech and asked if they were still happy to have their conversations included in the project.³⁷

³⁷ The addition of a post-conversation consent form for the Group B participants was at the request of the University of Brighton's Tier II Ethics panel. The ethical concern had been that (Group B) participants should not experience deception within their experience of participating in the research, and it was felt that they should be 'debriefed' as to the 'autism status' of their fellow participants and asked if they were still happy to participate, following this disclosure. The protection of participants against deception in research is undoubtedly important, and consent cannot truly be given unless it is fully informed. However, in prioritising the (Group B participants') right to be informed over the rights of (Group A) autistic people to *not* have their private diagnoses made public, the request to include this disclosure introduced new ethical problems of its own. In the context of a study that has participatory and emancipatory aims, it was difficult not to perceive this request as a backwards step. Whilst the purpose of the debriefing was to alert Group B participants to a previously undisclosed aim of the research (to investigate communication between autistic and non-autistic people), autistic 'status' still carries social stigma (e.g. see: Sasson et al., 2017, Chapter X) and so a post-hoc debriefing ran the risk of perpetuating an implicit view that autism is a 'dirty secret' or taboo. The final wording of the post-conversation consent form was eventually chosen so as to serve its function in revealing the previously undisclosed research aim whilst protecting *individuals* from having their diagnoses confirmed. These

Table 1: Conversation pairing and participant details³⁸

	Core Autistic Participant		Conversation number	Conversation condition	Interlocutor	
	Code	Demographic details			Code	Demographic details
Suite 1	A1	Autistic male with additional learning difficulties, in his 50s	1	Cross-dispositional (familiar)	X1	Male work colleague
			4	Cross-dispositional (unfamiliar)	B1	Non-autistic stranger, male, early 20s
			3	Matched-dispositional (unfamiliar)	A2	Autistic female, mid 30s-mid 40s
	A2	Autistic female, mid 30s-mid 40s	2	Cross dispositional (familiar)	X2	Male friend of A2
			5	Cross-dispositional (unfamiliar)	B1	Non-autistic stranger, early 20s
Suite 2	A3	Autistic female, French-English bilingual, in her 50s	6	Matched-dispositional (familiar)	X3	Autistic female friend of A3's, in her 50s
			9	Cross-dispositional (unfamiliar)	B2	Female non-autistic stranger, early 20s
			8	Matched-dispositional (unfamiliar)	A4	Autistic male, in his 50s
	A4	Autistic male, in his 50s	7	Cross dispositional (familiar)	X4	A4's non-autistic wife, 50s
			10	Cross-dispositional (unfamiliar)	B3	Female non-autistic stranger, mid 20s
Suite 3	A5	Autistic female, mid 30s-40s	11	Cross dispositional (familiar)	X5	Female Assert staff member, 30s

changes to the guarantee of confidentiality of autistic status were reflected in the Group A information sheet and consent form (Appendices 3 and 5).

³⁸ Table modified from an original version by Jagoe, in Williams, Wharton and Jagoe (forthcoming)

			14	Cross-dispositional (unfamiliar)	B4	Female non-autistic stranger, 30s
			13	Matched-dispositional (unfamiliar)	A6	Autistic female, in her 30s
	A6	Autistic female, in her 30s	12	Cross dispositional (familiar)	X6	Female friend of A6
	15	Cross-dispositional (unfamiliar)	B4	Female non-autistic stranger, 30s		
Suite 4	A7	Autistic female, early-mid 20s	16	Cross dispositional (familiar)	X7	Older sister
			17	Cross dispositional (unfamiliar)	B5	Female non-autistic stranger, late 40s
			19	Matched-dispositional (unfamiliar)	A8	Autistic male, in his 40s
	A8	Autistic male, in his 40s	18	Cross dispositional (familiar)	X8	Female non-autistic housemate and friend of A8
			20	Cross-dispositional (unfamiliar)	B6	Male non-autistic stranger, early 20s

3.1.3 Conversation recording

Conversations were recorded using a digital audio recorder (with a back-up recorder running at the same time). Participants had given their informed consent for the conversations to be recorded and were shown where the recorders were in the room and how to stop the recording if they felt uncomfortable. Some careful thought had been required when it came to selecting the medium of recording. In terms of capturing the most and the richest data, video-recordings are the gold standard:

Audio recordings record none of the nonverbal interactions that often form the backbone of a conversational interaction. Hence, they systematically exclude a source of information that is crucial for a full interpretation of the interaction (MacWhinney, 2000: 20).

Whilst it may be true that audio recordings do not chronicle as many of the paralinguistic features of communication as video recordings might, video recording can be intrusive (for discussion, see Laurier and Philo, 2006). Reporting on the findings of a study measuring first-impressions made about autistic people, Belcher (2020) describes the use of a go-pro camera attached to the head of the research assistant directing the conversations between pairs of participants, having what were otherwise described as naturalistic conversations. While this approach may lessen the impact of a tripod-mounted camera in the corner of a room, it does also strike me as not necessarily conducive to the most natural of interactions. For the planned data-collection in Talking Together, one of the most important considerations was that the conversations be as naturalistic, and as comfortable, as possible. Given that the core participants belonged to a group of the population who can already find social interactions challenging, and who experience higher than average levels of anxiety disorders (Beardon 2017; Cusack and Sterry, 2016; Lever, and Geurts, 2016), minimising potential extra stressors seemed the most appropriate choice.

At the end of each of the five sessions, audio files of the recorded conversations were transferred from the digital devices onto a password protected laptop, and then deleted from the recorders. Back-ups were stored securely on my personal OneDrive cloud connected to my university account.

3.1.4 Conversation transcription

Two central decisions were made in relation to how the conversations were transcribed with the first addressing the manner of transcription. A risk, when transcribing conversation, is that spoken language may be treated as if it were written language (MacWhinney, 2000:15). Formal punctuation and orthological spelling rules, when used in transcription, can cloud some of the more nuanced aspects of naturalistic, verbal communication and frame it in a

way that it was not delivered. The decision was taken to use transcription conventions (see Appendix 10) that have been widely adopted for use in Conversation Analysis (originally developed by Jefferson, 1984) so as to include information pertaining to, among other things, pauses, word stress and intonation, whilst remaining readable. These same conventions were also used by Sterponi and de Kirby, K. (2016: see Chapter C and 3.2.1, below) and Heasman and Gillespie (2017: see Chapter C); two pieces of autism intersubjectivity research that have been highly influential on this thesis.

The second area of consideration was in terms of the layout and visual presentation of the transcribed conversations. Ochs (1979) reminds us that whilst the use of audio recording devices may initially set the researcher at one remove from the raw data, once the transcription process begins, they are once again positioned to selectively interact with it, through the choices they do or do not make. For Ochs, transcription is theory and within her theoretical considerations, layout plays an important but often overlooked role. Readers of transcripts bring to bear on a text their cultural expectations of spatial organisation, she argues, meaning that (for readers educated in Western traditions) top-to-bottom and left-to-right biases play a part in how the visually recorded spoken word is engaged with.

The traditional transcription layout, whereby each utterance follows the preceding one in a vertical fashion, ‘tends to impose a contingent relation between immediately adjacent utterances of different speakers’ (Ochs, 1979: 47). Contingency of utterances is directly related to the extent to which meaning has been understood, and to degrees of relevance. In her discussion of vertically versus horizontally aligned transcription, Ochs highlights that often, when dealing with communication involving young children, there can be ‘a relative weakness of the relevance norm’ (*ibid.*). This sometimes lack of contingent utterances from children, she argues, is reason enough to seek an alternative to the typical top-to-bottom format. Speakers can instead be presented within independent, adjacent columns that still allow for a visual depiction of time passing, with utterances—where they are delivered sequentially and not overlapping—still placed on alternating lines down the page. Further benefits of this layout are an increased clarity of the volume of turns (since they are divided up into speaker columns), and greater ease in the mapping out of how speakers’ utterances relate to both their own as well as their interlocutor’s previous utterances.

Whilst it is emphatically not an aim of this study to infantilise autistic language use or compare it to child language use, a layout that assists, organisationally, in the mapping out of relevance, is clearly beneficial given the aims of this research. Furthermore, a recurrent theme throughout this thesis has been an attitude of healthy scepticism towards implicit, unquestioned norms: transcription norms are not immune from this. As such, and in light of the above, it seemed most appropriate to organise the transcriptions in a columnar format. The core, autistic Group A speakers, regardless of whether they speak first in any given conversation, were placed in the left-most columns (see below).

Conversation 17

	Speaker A7	Speaker B5
1	Erm (0.7) I don't know [where do] we	[h huh]
2	start (0.2) what do you think,	
3		Well (0.2) do-do we think loneliness is
4		a <u>probflem</u> (0.2) erm (0.7) I would say
5		yes (0.2) erm not (2.0) that it's
6		necessarily a-a problem that's unique to
7		Brighton and <u>Hove</u> ,

This was partly so as to address Och's ideas around left-right bias in reading: that leftness is associated with both prominence (on account of our grammatical organisation in English) and 'temporal priority' (1979: 50). Having all core Group A participants on the left also makes for greater ease of comparison between transcripts.

3.1.5 Talking Together Stage Two: Sense-making meeting

A follow-up sense-making meeting (see Appendix 11 for agenda) was originally scheduled for six months after the initial conversations had taken place. However, due to a number of

scheduling and researcher health factors, this actually occurred nine months after the original sessions. At the meeting, the four attending participants were invited to share their experiences of taking part; receive a summary of the initial findings (both in terms of the primary linguistic research and any key loneliness findings); and contribute to a decision about how best to make these findings available and accessible to a wider autistic public.

Drawing on autistic involvement in the design of results-dissemination is one of several key features of truly participatory research (Nicolaidis, 2019; Pellicano et al., 2017). All too often, research that is pertinent to the lives and wellbeing of autistic people and their families is stashed behind a journal paywall, and even when it is published with open access the dense academic terminology makes it inaccessible to non-experts. For this reason, suggestions were sought from the original participants as to the most suitable and engaging means of making results available to an autistic lay public. Furthermore, taking the time to share initial findings with those who have given their own time to help create said results seems like common courtesy and a small gesture of respect that any research team should be able to accommodate.

One similar criticism levied at interpretivist methodologies more generally is that researchers can hold an unattested monopoly over the interpretation of their participants' subjective experiences, raising the problem of:

...who owns the data, how will the data be used and how much control over the findings do participants have? Even though participants are often given a voice, it is usually the researcher who decides on: the direction that the research takes, the final interpretation of the data, and which information is made public (Scotland, 2012: 13).

By involving the original participants in a process of meta-commentary and critical reflection in the early stages of data analysis and results-determining (by means of the sense-making workshop) the opportunity was created for a more in-depth, authentic, first-hand insightful perspective on the data.

3.2 Data analysis

As with transcription (see Section 3.1.4, above), the researcher cannot be separated from the analysis of data in qualitative research (Watts, 2014). Every choice made in relation to selection of examples, coding, documenting and evaluating shapes the resultant findings (Starks and Brown Trinidad, 2007: 1376). The steps taken to ensure researcher reflexivity within the analytic process are further discussed in Sections 4.2.1 and 5, below. In terms of a framework to structure the analysis around, this study has two core struts and influences: Sterponi and de Kirby's (2016) discourse analytic approaches and the use of relevance theory as an exploratory method of analysis, each discussed below.

3.2.1 Sterponi and de Kirby's discourse analytic approaches

In their 'multi-dimensional reappraisal of language in autism', Sterponi and de Kirby (2016, as discussed in Chapter C) advocate an enhanced, more interrogative approach to the analysis of autistic talk-in-interaction. The umbrella-term of 'discourse analytic approaches' they describe augment traditional conversation analysis, providing 'much needed nuance, caution and alternative interpretations, leading to insights that have the potential to transform our perspective on language in autism' (Sterponi and de Kirby, 2016: 394). This is done by the asking of the question, 'why that, now?' (Sterponi and de Kirby, 2016: 398) when confronted with any atypical utterance, and the phenomenological framing of language use. This manner of investigation, they argue, functions as a 'corrective to the dominant and largely tacitly held view that language, in its essence, is [...] a reflection of an individual's cognition' (Sterponi and de Kirby, 2016: 395), and allows interactional and praxeological, dimensions of language to come to the fore. This attitude of inquisitiveness as to the subjective, perhaps initially invisible reasoning behind utterances (rather than immediately assuming incompetence) is one that I have carried through into the analysis of this case study's data.

3.2.2 Relevance Theory as an exploratory method of analysis

Relevance theory is a cognitive theory of utterance interpretation, not a methodology. However, there is precedent for the application of a relevance theoretic lens to the analysis of conversational data (e.g. Jagoe, 2012, 2015; Jagoe and Wharton, forthcoming; Leinonen and Kerbel, 1999). In her 2015 paper, Jagoe describes the analysis of the delusional talk of seven individuals with schizophrenia engaged in conversation with an interlocutor (the researcher, a speech and language therapist) from a relevance theoretic perspective. There is certainly no intention to compare autism with schizophrenia (least of all for the risk of opening old, unhelpful wounds; see Bleuler, 1911), but there are potential parallels in the absence or reduction of mutual manifestness between interlocutors of markedly different dispositions and the consequences that faulty assumptions around this, on the part of both interlocutors, may have on communication.

Relevance theory, in this case, served here as the explanatory and theoretical framework underpinning the interpretation of Jagoe's data, with the notion of 'mutual manifestness (or the lack thereof) [...functioning] as a useful construct with which to understand the to-and-fro of the meaning negotiation process' (Jagoe, 2015: 66). In a practical sense, in conversational sequences that involved meaning negotiation, 'the availability of assumptions, as evident through the discourse, was analysed' (Jagoe, 2015:58). Relevance theory also provided the foundational premises describing the mechanisms of (human) communication, on which the analysis was built.

Leinonen and Kerbel (1999), too, approached their analyses of the talk-in-interaction of three children with pragmatic impairments from the perspective of relevance theory. In their case, one author first scanned the transcripts for 'instances of communicative 'oddness', created either by the children or the adults' (Leinonen and Kerbel, 1999: 372), which were then discussed and agreed upon with the second author. They note that:

This level of agreement may seem somewhat surprising given that appropriacy judgements are considered difficult to reach agreement on [...] It is our belief that working from a theory perspective on pragmatic data renders the task of identifying instances of pragmatic difficulty a more reliable activity. The authors hope to

illustrate, in the data exploration below, that the theory provides a solid basis for determining the communicative adequacy of the utterances involved (Leionen and Kerbel, 1999: 373).

Approaching the analysis of the data from the theoretical basis of relevance theory, combined with an open-minded, inquisitive attitude and asking “why that, now?” should, in principle, afford a grounded, reliable yet sensitive reading of the data.

3.2.3. Data analytic method

The transcripts were read through and listened to several times each by myself, the primary researcher, in order to become familiar with the form and content of the conversations and the individual interlocutors. These first readings were undertaken within the Nvivo data analysis programme, with some initial codes made representing emergent themes relating to the loneliness qualitative content, stored for the planned secondary analysis to be completed later (and eventually reported on in Quadt et al., forthcoming). In those cases where conversational characteristics were already becoming apparent, these were recorded as notes in the research log. In the second phase of readings, now focused on the primary research aim, printed transcripts were read through, searching specifically for moments of communication breakdown with the view to analyze them through the lens of mutual manifestness. However, it became evident very quickly that there were, in fact, very few instances of communication breakdown through the whole 240 minutes of transcribed conversational data, for combinations of pairs of interlocutors. If anything, these conversations were consistently characterised by sustained mutual understanding. Further discussion of this surprising finding is provided in Chapter D.

The plan was revised, to instead focus on the qualitative differences in the communicative shapes of the conversations that had become apparent during the note-taking stage in the first readings. Fresh readings were undertaken of the transcripts, this time in sets of five at a time (e.g. *A1 + X1*; *A2 + X2*; *A1 + A2*; *A1 + B1*; *A2 + B1*) so that conversational behaviour of individual core autistic participants could be closely observed across the three

conversational contexts. In these readings I adopted a ‘first person perspective’, in order to ‘bracket out the researcher’s own perspectives and assumptions’ (Watts, 2013: 4) and achieve ‘closeness’ to the data (i.e. a refusal, or attempted refusal, to impose external knowledge onto the data, Watts, 2013: 3). Detailed notes were made on each conversation, capturing observations, impressions, qualities and patterns.

Coding schemes were developed iteratively, guided by the emergent patterns in the data (see Appendix 12). The codes were then organized into three overarching ‘motifs’: ‘*flow*’, ‘*tuning in*’ and ‘*running along the edges of meaning*’, with a smaller, technical motif ‘*mutual manifestness*’ that related to instances where its presence or absence was clear.³⁹

One of the earliest codes created for these conversations was for the presence of very long turns, or monologues. Page after page of these transcribed conversations were filled almost exclusively with the speech of a single speaker in a single turn. With closer scrutiny, it was clear that there was not one unifying cause for these long turns. However, monologic turns often contributed, along with other characteristics such as pauses (within turns), gaps (between turns) and lapses (between sequences), to a sense of stiltedness and of poor conversational ‘flow’. Yet ‘flow’, itself, is a somewhat ineffable concept when challenged with describing a conversation in which one is not personally involved. Koudenburg, Postmes and Gordijn (2017: 51), describe flow as wholly subjective: as the experiencing of a conversation as ‘smooth, efficient, and mutually engaging’. However, characteristics such as ‘high-quality turn-taking, short response latencies, and few interruptions’ (*ibid.*), gaps, lapses and pauses, interruptions and monologic turns are all objectively measurable and have come together under the *flow* motif.

The *tuning-in* motif brings together characteristics of the conversational form and non-propositional content that indicate that interlocutors are ‘on the same wavelength’ (Koudenburg, Postmes and Gordijn, 2017: 53). Features of coordination, such as mirroring the other’s speech (either by echoing specific words or phrases or offering parallel anecdotes), and finishing the other’s sentences combine with evidence of rapport and the

³⁹ N.B ‘motifs’ not ‘themes’ as the latter usually refer to qualitative thematic content.

presence of shared jokes and humour. These function as a form of affective coordination (Nelson, Grahe and Ramseyer, 2016), creating a sense of dyadic synchrony, or ‘closely aligned intersubjectivity’ (Heasman and Gillespie, 2019: 916) that Koudenburg, Postmes and Gordijn (2017) have termed ‘emergent we-ness’ or ‘solidarity’. Like turning a dial to hit the clearest frequency on an FM radio, *tuning-in* also includes those conversational characteristics that indicate an effort to achieve interpersonal synchrony, such as instances of accommodation, or invitations to signal mutuality, such as the tag question, ‘you know?’.

The *running along the edges of meaning* motif borrows its title from an observation made by Sterponi and Fasulo (2010) in their linguistic ethnographic analysis of a young autistic boy (‘Aaron’) and his mother engaging in verbal play together. Rather than ignoring Aaron’s seemingly meaningless utterance playing with the sound of the word ‘bug’, she joins him, echoing his utterances until the sequence develops into a joyful, rhymical duet.

‘Language is set free and allowed to run along the very edges of meaning. Yet the phatic sense of this interactional enterprise appears to get stronger as the two proceed in their on-the-spot invention of ways to go on’ (Sterponi and Fasulo, 2010: 135).

There were not many such instances of linguistic freestyling, but there were moments of left-field, non-tangential topic development and abrupt topic changes—which echoed the low demand for coherence noted in autistic group interactions by Heasman and Gillespie’s (2019)—as well as non-words and word play such as onomatopoeia etc. These features all seemed to have in common something of the diverging from ordinary, expected discourse and as such were grouped together under the *running along the edges of meaning* motif.

For the final stage of the analysis, the transcripts were revisited and combed through once more: this time from a ‘third person perspective’, which involved applying ‘the analyst’s thoroughgoing knowledge of a relevant theoretical and/or substantive literature’ (Watts, 2013: 4). From this stance, extracts that might support, qualify, question or contradict existing literature and the hypotheses driving this study were carefully, purposefully selected and are included below.

As a means of fostering ‘trustworthiness’—i.e. the extent to which a researcher can persuade both herself and her readership that the findings merit attention (Lincoln and Guba, 1985: 290)—I ensured, throughout the data analysis stage, that I kept a clear ‘audit trail’ (Nowell et al., 2017: 3), including a reflexive account of my process (see Section 4, below, for a further discussion of issues around data credibility).

4. Ethical considerations

Prior to initiating the data-collection process, an application was made through the Tier II Arts and Humanities Ethics Panel at the University of Brighton, including all materials to be used with participants. After a small tweak to the research proposal (see footnote in 3.1.2, above), the panel supported the research to proceed.

Numerous steps were taken throughout the designing of the data collection stage to ensure all participants were treated with the utmost respect and consideration. Many of these steps (such as use of a gatekeeper, accessible materials, choice of venue, etc.) have been outlined above as they fall within a participatory research agenda. Additionally, in order to protect participants and guarantee that their participation was both voluntary and fully informed, a two-week grace period was given following the recording of the conversations to allow for participant withdrawal. Audio files were then sent via a secure online service, following GDPR principles, to an academic transcription service. Names and any information by which participants may have been identified were removed, and the pseudonym codes (e.g. A1, B3, X4) were used instead.

4.1 Participant payment

As a researcher influenced by critical autism studies and critical disability studies, I felt it was important to pay for participant-contributor’s time and expertise. British autism charity Autistica have led the way in recent years through their commitment to paying contributors,

at all stages of the research process, according to the National Institute of Health Research's 'INVOLVE' policy (which outlines the fair payment of fees and expenses for members of the public engaging in health research- see: INVOLVE, 2010). National policies regarding the involvement of service-users or target populations in research generally recognise that as well as meaningful participation, appropriate payment should also be encouraged (see Rickard and Purtell, 2011; and Nicolaïdis, 2019 for autism-specific guidelines). The University of Brighton's ethical guidelines, however, state that financial rewards or inducements must not be offered. The rationale behind this, I believe, is to avoid coercion and as such is a valid concern when conducting research that involves the public: in particular a potentially vulnerable public. The issue was further complicated by the fact that this research involved participants of three different types; local autistic members of the general public; students at the university; and an unknown group of familiar partners chosen by the core autistic participants. Would it be ethical, or even reasonable, to pay some of the participants for their time and not others, even if the remunerating of autistic participants were possible?

The deliberation over payment was another area that revealed a slight tension between standard university ethics procedures and a research situation involving 'vulnerable' autistic participants that is perhaps more nuanced than the general ethics procedures currently allow for. The inclusion of an informed, critical disabilities perspective within the evaluation of ethical proposals relating to research that directly involves such participants (or, researchers) could only enhance research delivery and social impact and it is my hope that this may evolve within the university research culture as participatory research methods become more commonplace. The resulting compromise was to offer all participants reasonable travel expenses to and from Community Base, the venue where the conversations would take place. Simple refreshments (tea, fruit, biscuits) were also provided for both stages.

4.2 Researcher position

4.2.1 Methodological position

As discussed above (see section 1.1.1), I am both a researcher and a member of the community that is the object of the research: as such I am a naturally placed participant-observer. Having received my autism diagnosis as an adult, I straddle a further divide: I have had both personal experience of the intersubjective communication difficulties that can occur in cross-neurological communication, and experience of many years without the autism ‘label’ to explain them (be that constructively or dismissively). While these insights do lend themselves to a potentially more nuanced interpretation of the data, they also carry the risk of biasing my interpretation of it. This is something I have kept close in mind throughout the analytic process and to the best of my abilities I have engaged in a practice, common in phenomenological research, called ‘bracketing’, whereby any ‘a priori knowledge and assumptions’ are set aside (though not abandoned) so that the data can be attended to with an open mind (Starks and Brown Trinidad, 2007: 1376). Furthermore, I have not been acting as an isolated researcher; I have benefited from engagement with my supervisory team, whose expertise has facilitated a context for critical reflection. In order to improve validity (see Section 5.1), the data was also assessed by a second analyst, my primary supervisor.

4.2.2 Relationship to participants

Whilst, as an autistic person in the Brighton and Hove area, I had a pre-existing relationship with the gatekeepers Assert, I had not met any of the core participants prior to the research commencing. Participant X5 was an employee of Assert who had stepped in as the familiar partner of one of the core A group participants who didn’t feel she had anybody she could bring. Participant X5 and I therefore already knew one another, but only within a professional context.

5. Data quality and credibility

When designing a piece of empirical research, particularly research that involves the voluntary contributions of participants, it is essential to ensure that the results you intend to generate may be of sufficient quality to be considered useful to the larger canon of connected research. Wasting one's own time is one thing; wasting the time and efforts of (vulnerable) participants verges on the unethical. At the design stage what matters are the ways in which any potential finding(s) may or may not be relatable to the wider world. Some commonly agreed upon benchmarks for measuring the quality and credibility of data include, *validity*, *reliability* and *generalisability*, each of which are dealt with below in relation to this particular research project.

5.1. Validity

According to Leung (2015), validity in qualitative research is equivalent to the 'appropriateness of the tools, processes, and data' (2015: 325). Throughout this chapter, and in fact the preceding literature review, time has been taken to map out the trajectory from ontology through to epistemology, to methodology and then to methods, in part so that there is the traceability required to gauge methodological validity. The research questions were designed so as to allow a probing of the eventual data, and the methods of collecting data (ethnographic case study) shaped so as to best support an enquiry within an interpretive paradigm.

5.1.1. Ecological validity and verisimilitude

One type of validity, in particular relation to methods, is ecological validity. This construct describes the way in which a testing procedure in research replicates the conditions under which the thing being 'tested' would occur, naturally, in ordinary life. This is highly relevant for this particular case study, as the object under scrutiny is the naturalistic communication of the core autistic participants. Many of the criticisms made in Chapters X and C, toward

previous research into autistic communication and ToM research, have been based on the lack of, or reduced, ecological validity of the test conditions.

There are two primary means of establishing ecological validity. Verisimilitude (Franzen, and Wilhelm 1996) speaks to the extent to which the demands of the test task resemble the demands of the everyday task, whereas veridicality (*ibid.*) pertains to the extent to which test results relate, statistically, to other measures that typically predict performance on the target everyday task. Based on the desire to maintain an overarchingly qualitative approach, verisimilitude was deemed most appropriate for this research. The aim, then was that the conversations accurately replicated naturalistic conversation and this was achieved through a number of different means; by (a) giving only minimal prompts; (b) minimising the sensation of being observed as much as possible, in leaving conversationalists alone in the quiet conversation room and choosing small audio recording devices over video-recorders; (c) allowing sufficient time (10-12 minutes) for conversations to warm up and become established; (d) introducing the core autistic participants to the task gradually, by beginning the set of three conversations with their chosen, familiar partner; and finally, (e) by ensuring that the conversations were both meaningful and purposeful (rather than contrived and trivial) through choice of topic.

5.2. Reliability

Reliability, in qualitative research, relates to the consistency of findings and method. This includes whether the findings are likely to be replicable in a subsequent study with similar aims and method, and the extent to which the findings demonstrate what you have purported they do. Analysis of qualitative data should be approached with the same attitude of Popperian falsification as quantitative research (Leung, 2015; Patton, 1999), in that alternative, rival explanations are explored logically and inductively. In this way, a stronger claim can be made in relation to the support behind the conclusions drawn. This attitude was taken throughout the analysis of the data collected from the Talking Together project, and can (hopefully) be noted in the descriptions of the analysis in Chapter R.

5.2.1 Triangulation

An additional means of enhancing validity within the data analysis stage is triangulation. A construct borrowed originally from land surveying, it entails the use of a second (or multiple) landmark(s) to significantly augment one's ability to orientate oneself (around a landscape, or data). Given that this case study is decidedly qualitative in its approach, and draws on only one type of data (naturalistic conversation), triangulation by multiple or mixed methods, here, is not really possible. What this study does involve, however, is different groups of participants engaging with the same methods. This lends itself to a triangulation of sources (Patton, 1999); patterns of consistency between the data from different participants can be determined and evaluated.

Leung (2015) and Patton (1999) both also cite the use of participant verification as a further method of achieving analytic triangulation and increasing validity. Within this research, two stages have been inbuilt, where participant verification and feedback were sought. Firstly, open-ended participant feedback was invited immediately following the conversations, by email. Secondly, and more significantly, the sense-making meeting (described above, in 3.1.5) created the opportunity for initial findings to be reviewed by the original participants and their meta-comments to be taken into account.

5.3 Generalisability

The primary criticism of the case study centres on the limitations of the generalisability of results (Bell, 2010; Cavaye, 1996; Gillham 2000; Løkke and Dissing Sørensen, 2014). Generalisability pertains to the extent to which findings from one piece of research can be extended and applied as a general rule. Case studies, by design, focus in great detail on a small sample of a target population, and whilst this can often produce rich, localised data it also often means that the sample size is too small to be able to uphold claims of generalisability.

The sampling in this study was purposeful (Palinkas et al., 2015; Patton, 1999), in that the participants were selected on account of their being autistic adults who used language as

their primary mode of communication as well as their availability and willingness to engage with the research. Within these parameters, I chose to not impose any further (demographic) stipulations, so as to allow for as much variability as possible. Notwithstanding the limitations of sample size, finding a group of ‘typical’ autistic people is nigh impossible, given the characteristic heterogeneity of autism (e.g. see Beardon, 2017; Fletcher-Watson and Happé, 2019). In some ways then, allowing a degree of chance to play out in terms of who the eventual participants were (following the initial selection criteria and having some prior engagement with Assert, the gatekeeper) was part of the purposefulness of the sampling.

In case studies, ‘the focus is on understanding and illuminating important cases rather than on generalizing from a sample to a population’ (Patton, 1999:1197). In what way, then, can findings become useful if they cannot be generalised beyond the confines of the case group? Well, returning to the discussion in Section 2.2, above, this case study is taking a concept-driven research path (Løkke and Dissing Sørensen, 2014) with the explanatory power of the initial hypothesis being investigated. It is not an aim of this study to arrive at a broadly generalisable theory relating to autistic communication, but it is a hope that by studying autistic and cross-neurological communication in the microcosm, insights might be gained that can shape this initial hypothesis, and inform future, broader research.

Chapter R: Data Analysis

Language and speech do not mirror experience; rather, they create representations of experience. Meanings are always in motion, inclusive, conflicting, contradictory. There are gaps between reality, experience, and performances. There is never pure presence. We have reached the end of pure description. Description becomes inscription, and inscription becomes performance.

(Denzin, 2013: 37)

1. We're all strangers here⁴⁰

Do you want to [↑start=]

[No YOU] you start off. d-DO the
bottom one yeah

↑0↓kay (0.7) the one about
strangers talking to each other.

£ er-yeah cos we're strangers
aren't we £

⁴⁰ This section was awarded 'Honorable Mention' in the Society for Humanistic Anthropology's 2019 Ethnographic Fiction and Creative Nonfiction Writing Competition, and was published in *Anthropology and Humanism* (Williams, 2020a). Reproduced here with permission.

£yeah cos we've never met before
↑have we £

((wheezing or laughing sound))

@ cos, we're, we're all strangers
here, aren't we? @

The alarm –tinny, midi-harp compressed through my phone's small speaker–interferes with my dream about crayfish flooding in through the patio doors. It feels like the melody is etching itself onto the surface of my cerebellum with a pyrography pen this morning as I try, for several minutes, to slap out an arm from under the (two) duvet(s) to quell the noise. Singed brain smell. Lactic acid in my limbs. The top two-thirds of my head held tight in a wooden nut-cracker. Not today.

I count upwards, internally, while I rub the inside of my left thigh against the sheet below me. One, tow, thr, one, wwwwon, one, tooo, three... The leg doesn't move much, just a few millimetres in each direction but the friction against cool Egyptian cotton sparks something inside of me. It touches my will. We're getting somewhere. I reach fourteen and feel like I'm about to stir and sit upright but the effort of garnering my muscles tumbles me back down to one. One. One-two. One. Something like forty minutes later I launch up in one swift movement, surprising myself. I swing my legs onto the sheepskin by the mattress, spray three types of

vitamins onto the inside of my cheek (synthetic mint, plastic peach, sour grapes), and climb out of the hutch. Routine begun. I'm up.

Andrew is up at 6am because he always wakes up at 6am. Jess his dog is also up and is eating her breakfast out of her favourite bowl. She is a cheeky dog and will try to ask for more breakfast when she has finished but he knows he can't give it to her because the vet told him she was getting too fat two years ago when he had to take her because she had a bad tooth taken out. It is a good job he isn't a dog because then somebody could say he was getting fat and stop him eating but he is in charge of what he eats and he is happy about it.

He fills his plastic Frosties bowl that he sent off for with some coupons he cut out from the side of some packets of Frosties with Frosties almost to the top and then pours on some semi-skimmed milk on top of the Frosties. Frosties are Andrew's favourite. The clock is ticking and it's a bit annoying but it is also helpful so he knows what time it is. He usually has to be at work where he is a cleaner at 9am but today is not a normal day and he feels a bit funny in his belly but Jess comes and rubs her silly hairy head against his leg and it makes him laugh and tell her that she is a good dog because she likes it when he says that. Anyway, he is waiting for Rob to arrive to take him to the meeting he is going to which he has agreed with his boss about because it is for important research and he is lucky because he works at the university cleaning the computer rooms and he is lucky because his boss understands about important research and is very kind to him.

Katy's alarm has gone off and been snoozed three times. Mornings aren't really her thing. She prefers to sleep in; bed's her comfort place. It's stacked high with pillows and cushions and plushies and a brightly patterned velvet throw. She gets up and folds herself into her fleecy dressing gown, pulling thick socks up over her leggings. Padding along the hallway she sees her flatmate's door is closed. He will still be sleeping. He worked a late last night at the restaurant they both work in.

She fills the stove-top coffee-pot with water below, the Lavazza grounds and a cardamom pod above, before screwing on the lid and lighting the gas. She takes some yoghurt from the fridge, pours it into a bowl, then stretches up on tiptoes to her shelf next to the extractor fan. She pours the flour (measured by eye) into the bowl, adds some bicarb, salt, dried Mediterranean herbs from the mix she made a couple of weeks ago and a splash of olive oil. She kneads the dough together and splats some rounds onto the griddle pan, wrapping the rest in clingfilm and leaving in it the fridge for her flatmate Joe to find. She writes 'EAT ME' next to a grinning smiley in pink biro on the face of a Post-it note and sticks it on the dough as an after-thought. While the flatbreads cook she chops vine tomatoes, shallots, a lime and fresh coriander to make a basic salsa, and decides, almost too late but not quite, that she might as well poach herself a couple of eggs too.

It's now a lot later than I'd planned, closer to seven than six, but outside the boat everything is still dark. Walking up the pontoon, in my plastic shower shoes and nightshirt, an early-starter oyster-catcher is disturbed on the silty edge where the river is beginning to recede and curls off towards the far bank. The abandoned warehouse, a hunched hulking shadow flashing goofy teeth, watches on. The wooden slats below my feet bounce and creek as I move along them, ropes groan and rusty metal opines. There's the faint laughter of gulls from downstream and high syrupy hiccups from a passerine family stirring in the buddleia.

Up the ramp – not too steep as the water is high – and across the gravelled forecourt, past the taps over-knitted with bindweed and ivy, past the propane gas cannisters piled up against the workshop wall, and finally the upturned, rotting skeleton of a small skiff before I arrive at the shower block. I feed tokens into the slot and pull the mouldy curtain just partly across. I feel bad covering the floor with water but I can't face having the sticky, black-speckled plastic touch my skin. Ten minutes of hot jet. The tiny room, instantly filled with steam. I go through my ritual, rinsing and scrubbing in the correct order, keeping half of one squinting eye on the descending timer to make sure I'm not

suddenly left with 30 seconds and a whole leg to shave. It has happened before.

I step out carefully, avoiding the woodlouse escapee making its way across the tiles. I won't have time for breakfast now, being so behind, but my costume is ready and waiting, planned weeks ago and hung out last night from the rail over the sliding doors. Dress (pink and blue tartan, below the knee and high-collared), tights (woollen, cerise, my lucky ones), pants (black, scalloped edges), bra (underwired, professional, black with pink roses), and shoes (patent magenta brogues) lined up below the dress. A proper person's costume, all matching colours. People think better of you when your colours match. You snag less.

Rob is Andrew's friend from work. He works in the computer rooms doing IT and he is coming today because you need to bring somebody you know well, like a friend or a family member and Andrew's sister and brother are both dead. Andrew's brother had learning difficulties like Andrew but he needed lots of help and he was in a home but he also was schizo-something and he killed himself. He was forty-six. Andrew thinks it was three years ago his brother died because it was the same day that the Batman movie came out and he went to see it in the cinema and felt a bit sad. His sister had lots of things wrong. He isn't really sure what, but she died a long time ago and Rob said he would come along and Rob is a very nice man.

The doorbell rings and Andrew feels a bit worried because he doesn't know who the woman is who is doing the research but he has seen her face on the letter she sent him and he has to sign and she looks friendly because she is smiling. He is happy to be going to Reach because he knows the people there and the rooms and they are very nice to him and helped him on a course about understanding your feelings for people with autism like he has got because that can be difficult sometimes. There is a lady on the reception who spoke to him about his dog Jess and said she had a dog and they spoke about their dogs and she was nice and he hopes she is working today so he can tell her about Jess.

Katy has to be at Reach for 9.30am and her catering course doesn't start 'til one, so she'll have time after to find a coffee shop to sit and read in. Sitting quietly with a good book and the aroma of coffee while the world moves quickly around her is one of her favourite things. The noise just helps her phase out. She sifts through the pile at the bottom of her bed. Some clothes for the laundry, a stray red M&M cuddly toy with a chocolate-drunk expression and dangling white legs, the council-tax bill, some bus tickets, a limited edition OXO tin filled with jewellery (mostly a series of friendship bracelets she wove during a thread-craft phase), and, amid the books, 'Salt' by Mark Kurlansky. She retrieves it and pushes it down into her bag, covered in mermaid sequins, making room between the pink metallic water bottle and the mirror ghost cube puzzle.

She hopes today might be a chance to meet people. She's been going to various meet-ups she found advertised online. The walk-and-talk rambling group, Café Científico where experts give talks before an open Q&A, the astrology enthusiast club, and even the monthly autistic social at Reach thinking it might be easier there, but each time it just seems really hard to talk to anyone about anything real. It's all the monotonous small-talk stuff and anyway, there are so many people there and it's difficult to edge into a group of people already chatting together.

My body is vibrating as we idle at the lights. I let all my cells rattle in unison. It's calming. I close my eyes and let the sun, now hanging bright above the sea, batik shapes on the inside of my lids. Turquoise, lime, brown, slow-moving like grass. I rock a little in my seat, in the back. Just a little. This coast road gets slow in the mornings but I've left plenty of time. The taxi was there waiting for me on the mini roundabout, if a little perplexed at his pick-up point. Me, weighed down with bags, worried what the folk making their homes in the broken boats stacked up on the edge of the boat graveyard, under tarpaulins, might think of the excess of hailing a cab. I creep past them and close the gate lightly. Today is important. I need all the help I can get to make sure I am a reliable and real person right through until... what time is the last session? I think we finish at 4.45...

The cab lurches back into motion and the thought, the *imagining* of the ‘sessions’ that are soon to take place coils down my throat and around my waist, squeezing until the air inside my lungs is white electric. My bowels sizzle and my ears ring. I see my left hand has locked into a curled claw with the nails from the index and adjacent finger cutting into my palm, which, of course, is wet with cold sweat. Behind my sunglasses, I glance slowly up to the rear-view mirror to evaluate whether the driver has noticed. He has not. I discreetly shake my arm from the shoulder, which I can still move, and use my right hand to unpeel the fingers. ‘Everything will be okay’ I tell myself, on loop, fifteen times, in my kind voice (inside my head). ‘The day will be over soon and you will have done a good thing’ (eight times). I hope I will have done a good thing. Until I’ve done it I won’t know if it’s good. These people. I want so much for them to get something meaningful out of it. It’s such a responsibility.

I’m excited about today. I’ve rehearsed it in my mind so many times, and had the various information packs, consent forms, and hand-made thank you cards (with custom badges and a sachet of tea inside) divided up into the various plastic wallets into the various card folders and laid out on the boat floor for the past two weeks. I have two digital recorders (one to run as back-up) and refreshments to cater for every configuration of allergy or preference possible. There are not many things that could go wrong, except the worst thing of all; someone not turning up.

In terms of my data, I have recruited enough participants to mean that I have more than enough. If everyone shows, and no-one withdraws afterwards, I will have, across the three days, around 300 minutes of naturalistic conversation data from autistic adults. It’s wild. The thought of it makes me fizz like sherbet. But today is not really about the data anymore. The data is a happy by-product. Today (and the other two dates) are about *Talking Together*. It’s about bringing autistic people and young people from the university together to talk about their experiences of loneliness. It’s about listening to people who don’t get heard. It’s about making human connections. I cannot bear the idea of someone making the trip all the way in to the centre of town, anxious,

excited, ready to talk with an interested stranger about loneliness and be met, finally, with: no one.

I take my phone from my rucksack and make a new memo note. I should record these reflections to put somewhere in my thesis. When I first thought of framing the data collection this way, around conversations about loneliness, my reasoning felt very simple. If I was asking autistic people for their time, and their expertise (in the lived experience of being autistic), then I wanted them to get something valuable out of the exercise, beyond the potential longer-term benefit of improved understanding around autistic communication. When I discovered the university ethics panel would not allow me to pay them for their time, my conviction was even stronger. I heard a BBC radio programme about the loneliness epidemic in the UK one morning, over my eggs, and thought: Bingo! I can make the conversations part of a community engagement project. Young people and autistic people, both prone to loneliness, can come together to share experiences, and think about ways of tackling it in the local community. Hell, maybe I can find a small pot of funding to facilitate participants co-producing a pilot of whatever they come up with. Why wouldn't the university want to support that? What I realise now though, an hour away from the first conversation, and what I type into my phone, is that loneliness is absolutely, fundamentally related to communication. When you are habitually misunderstood, habitually othered and habitually locked out of mutual understanding and the human connection that it engenders, chronic, soul-eating loneliness becomes a bit of an inevitability. I know this to be true. This is probably why I am doing this research in the first place, beyond my fascination with language. If you can talk about it, and you can feel heard, maybe it's a way out.

In Reach there are lots of people. There is Gemma who is the woman from the letter and she looks young and is laughing a lot and an older man who is her professor and lots of biscuits on the table and Andrew says can he have a cup of tea please. Bianca and Lee from Reach are walking through and Andrew is saying hello to everybody. Gemma the woman from the letter says she is autistic and Andrew doesn't think it is true because she is

very clever and looks normal but Gemma is laughing saying she isn't normal and she lives on a boat and Andrew thinks that must be really exciting and wants to know what kind of boat and does she have a dog? Gemma is very busy keeping coming and going and she has said Andrew and Rob can wait here with the cups of tea and she will come and get him in a minute but Andrew isn't sure exactly what is happening but it is nice to be at Reach and the tea is a bit weak but the professor man is talking about the university and asking Andrew about his job.

The bus was late and she hadn't been able to remember what stop to get off at so when she finally arrives Katy is a bit flustered. Inside the Reach building there's a paper sign Blu-tacked onto the wall as she enters - '**Talking Together**: On the first floor' and a large arrow pointing the way. She climbs the stairs. She thinks about taking the lift as her Ehlers-Danlos was threatening a flare yesterday, but her hip joints seem okay today, plus, she's impatient to arrive and see what's what. At the top of the stairs another sign: '**Talking Together**: in here!'. Katy presses on the door the sign is attached to and slowly recognises the waiting room she's been in before when she first came to register with Reach after her diagnosis. That was a couple of years ago now, when she was twenty-two. Apparently, females often get missed as children, that's what they told her. She's heard it's changing now though. She'd thought, once she'd adjusted to the idea of herself as autistic, once she'd learnt what it all meant, that maybe having the diagnosis might help her somehow. It might make life easier. It hasn't really, yet. Sometimes it makes her feel even more alien. There's a reason why she's different and she can't change it.

The room is quite busy. Three men, all older, and one woman dressed in bright colours. The colours make Katy smile. The woman is also wearing a badge made by a local disability designer she likes; she recognises it by the bold background colour and handwriting on the white speech bubble in the middle. This one says 'fancy a chinwag?'. She doesn't think she's seen that one on the website. 'Hi I'm Katy. I like your badge' she says, quietly but quickly. The woman smiles like the Cheshire Cat (actually, her dress is quite Cheshire Cat-like) and extends a hand in an oddly

formal handshake. 'Hi I'm Gemma, nice to meet you! Thank you for coming!'.

Katy follows Gemma down the short corridor into the meeting room, with Andrew, her first conversation partner, behind her. Gemma is bending the fingers on her left hand, clicking the joints. You wouldn't immediately notice it as a stim if you weren't looking for it, she thinks, but Katy recognises the repetitive action and somehow it makes her feel more relaxed. There's something nice about being around other autistic people, especially now. It might have felt weird if the researcher wasn't autistic. A bit like she was a specimen under observation.

In the room she sits down and looks at Andrew sideways. He isn't quite what she was expecting but he seems sweet. And friendly. That's what's important. Gemma is asking about the light ('is it too bright?') and the temperature ('are you too hot?') and telling them both what is going to happen. They have some prompts they can use on a small slip of paper, if they want, but really all they have to do is talk about whatever they'd like to share about loneliness. Katy wonders what she's going to say as she hasn't prepared anything and the instructions seem quite loose, but at least this isn't boring small-talk. 'Are you ready?' asks Gemma, looking up and to the left as she speaks but then directly into Katy's face, and Andrew's. She nods. Andrew says he's ready too.

Andrew follows Gemma and another lady in a silver jacket and shiny bag into the small room where you talk about benefits if you need help with them where he spoke with Lee one time. He sits down on the chair with its back to the window and looks at the small pieces of paper on the table and worries that he will have to read them because he is not very good at reading but Gemma is reading it for them and showing them how to stop the recorder if they want to stop it and he wonders why he will want to stop it and if Jess is okay. The other lady and Andrew are going to talk about loneliness and he knows a lot about loneliness because one time about three years ago he was very lonely and he thought about ending it but he didn't want to make a mistake and now he has Jess and she would be lonely without him so he is okay now but he has a lot of things he can say that he hopes will be good for the research.

‘Once I’ve pressed record I’ll leave the room and come back in about ten minutes. Okay! Conversation Number 1, recording... now!’

‘Do you want to start...’ asks Katy, suddenly feeling a bit awkward in the silence with a stranger.

‘No you, you start off. d-Do the bottom one, yeah’ says Andrew, remembering that the last one was the one that sounded like a good one.

‘Okay... the one about strangers talking to each other...?’

‘Yeah cos we’re strangers, aren’t we? Yeah cos we’ve never met before have we, you and me? Cos, we’re, we’re all strangers here, aren’t we? Heheheh’

Outside the room in the hallway, my back propped up against a wall taking my weight, I hear them both chuckling. I set my phone timer for ten minutes. I can’t quite believe it all seems to be working. A flash of elation.

I pace up and down, tidying piles of paperwork, checking my schedule, keeping an eye on the clock, wishing somewhere in the back of my mind, that I could be in there with them, talking together...

In choosing to meaningfully engage autistic people with the creation of a dataset of naturalistic conversational data, the Talking Together project became multiply valuable. In total, the project generated over 245 minutes of recorded and transcribed naturalistic conversation data for the primary linguistic analysis. It also yielded rich, qualitative data relating to experiences of autistic loneliness (an analysis of which has been added to a larger-scale, quantitative study into autism and loneliness and reported on in Quadt et al., forthcoming, and discussed in Williams, 2020b). Community engagement around an

important issue was realised and in so doing, meaningful interactions between strangers were facilitated, as evidenced by the extremely positive immediate feedback from participants and the reflections shared in the (albeit minimally-attended) sense-making workshop nine months later.

Section 2 of this chapter begins with something of the qualitative content as a means of providing context for linguistic analysis to come. This thesis' principal concern may be a linguistics-oriented one but what is essentially being investigated is the efficacy of human connection through language. This section, then, makes a little room to listen to the concerns that emanate from not being heard. Section 3 moves into the primary linguistic analysis, exploring the data through the lens of relevance theory and the three main *motifs* of 1) *flow*; 2) *tuning-in*; and 3) *running along the edges of meaning*.

2. Talking Together about loneliness

It would be an unforgiveable shortcoming of this thesis not to include at least some mention of what the Talking Together participants said about their experiences of loneliness itself. This qualitative content is, of course, not the primary aim of the thesis, but it evolved into an important secondary aim as the shape of the data collection project developed. As an initial means of becoming familiar with the transcripts and the voices of those participants who had volunteered their contributions, I undertook an initial content-focused, iterative reading of the transcripts. It is hoped that in presenting some of the findings that were reached through this thematic analysis here, it will help to ease your way, too, into the primary linguistic analysis to follow (in Section 2 of this chapter).

In her book '*Ethical Loneliness*', Stauffer (2015) recounts a filmed interview with holocaust concentration camp survivor, Hanna F. After about 90 minutes, the interviewer tells Hanna that she was "plucky" to escape the way she did: Hanna understands "lucky". As Hanna begins to try to correct the interviewer, saying that it wasn't luck but something else that helped her survive she is cut off abruptly and the interview ends. They are out of time. In the background while Hanna is trying to answer, interviewers can be heard arguing. Stauffer describes this failed communication as bitterly ironic: 'interviewers set up a scene for

hearing and then fail to listen' (Stauffer, 2015: 73). This is the second reason for including a brief dip into a content-focused, thematic analysis of the data. If you ask somebody a question, it is important to listen to the answer.

For this first pass of the data, each of the transcripts was read through a number of times within the NVivo data analysis programme and coded with iteratively-developed emergent themes relating to the qualitative loneliness content. This initial analysis found that two different types of loneliness were discussed. The first type constituted a practical kind of loneliness: a lack of opportunity to meet with and spend time with other people due to financial constraints, an absence of community spaces or reduced ability to access them. Related speculation over other factors contributing to loneliness in general were also heavily discussed, and included (in descending order of prevalence): 'the influence of social media', 'social isolation', 'homelessness' and 'lack of support'.

The second, and most prevalent type of loneliness that emerged from the data was a deeper yearning for meaningful connection with others and the sense that this was out of reach. Mental health issues such as depression and anxiety were commonly cited as both causes and effects of personal loneliness, along with issues directly stemming from being autistic in a predominantly non-autistic world: these included difficulties in connecting with non-autistic people, difficulties in finding others with similar interests, and a lack of being either understood or accepted by wider society.

For example, one autistic participant ('A3'), a bilingual auxiliary nurse in her early 50s, in discussing her lack of meaningful connections, described her difficulty in making friends:

“...sometimes I have trouble to, erm, to have a conversation or be understood because I don't, mm, have the same thought process? Which makes it weird sometimes and people are wondering 'what are you saying?' or 'I can't understand what do you mean' or, you know, those kind of things and you have to break it down for people.”

“It never lasts, or people—once you leave [a job]—they just forget you. Or they say ‘give me your phone number’ and then they never call so I got used to it and I deleted a lot of phone numbers on my phone. It’s stupid to pretend you have friends when you haven’t got them.”

This participant spoke a great deal about not being able to make herself understood, and not because English is not her first language, but because she doesn’t ‘have the same thought process’ as the majority of people she interacts with. She also frequently returned to the distress of feeling a ‘lack of connection’ in multiple contexts: with her co-workers; her classmates when she was a child; and even with her older sisters at home when she was small. This experiencing of herself as different and unable to make herself understood by those around her, was what this participant seemed to most attribute her deep sense of loneliness to.

Another participant (‘A1’), an autistic man with additional learning difficulties, also in his 50s, shared his confusion and sadness about the lack of support available when he needed it:

“...with me having, erm, having, erm, autism, and learning disabilities, I mean I understand a bit more about it today than I did do, but when I wasn’t getting the support I felt very lonely... You know, cos, er, you know, you know I didn’t have any connection... I was crying out for that support.”

“...and when you phone it [a helpline] no one ever answers. I mean, I think someone will answer it eventually but from my experience no-one’s ever answered it. I’ve never actually spoken to a person on the other end of the line on this, what-whatever number it was... You know, if people are crying out for help because of how they feel and there’s no help then of course they’re going to feel lonely or, you know, get into a state...”

He is describing the feelings of being abandoned by those in a position to help, and how that causes ‘a loneliness more profound than simple isolation’ (Stauffer 2015: 5). Not being able to make yourself understood, and not being able to connect in a satisfying way with fellow

humans, can create a deep pain of isolation. Not having this pain acknowledged can be experienced as soul-crushingly dehumanising.

In a recent opinion piece in *JAMA Psychology*, Jeste, Lee and Cacioppo (2020: 1) describe loneliness as a ‘hard to detect and lethal behavioural toxin’ contributing to growing suicide and opiate epidemics. Speculating on its cause, they suggest an ‘underlying thread of social anomie and disconnection’ (*ibid.*). Recalling Stauffer’s (2015) ‘ethical loneliness’: it is the disintegration of human connectedness founded on moral, ‘ethical’, principles, that causes this unique and profound kind of loneliness. Jeste, Lee and Cacioppo (2020) touch on this with their use of the word ‘anomie’—the breakdown of the bonds between individual and society that maintain social cohesion and a personal sense of belonging—as the proposed source of ‘toxic’ loneliness.

The term ‘anomie’ was originally coined by Durkheim (1897), a sociologist, in his monograph about the growing incidence rate of suicide in newly industrialised France (and Europe). Capitalism was beginning to boom, bringing both wealth potential and an erosion of previously long-established social norms: the influences of religion and family on an individual’s choices were becoming weaker. Durkheim was witnessing a sharp increase in general despair around him that was exemplified most tellingly in a surge in the numbers of suicides. At this time, Durkheim theorised anomie to be a condition that was experienced during moments of social or political change, either on an individual level (i.e. when suddenly coming into a life-changing sum of money, or conversely, losing it and finding oneself in a new echelon of society) or a national one (such as during war time). In such moments, he theorised individuals would find themselves in a position where the norms and values they held dear were no longer reflected in the society around them, engendering a profound sense of disconnection. While ‘anomie’ has broadened its meaning to include a sense of societal ‘normlessness, a ‘condition [of the social system] in which the norms have lost their regulatory power’ (Seeman, 1975: 102), it is perhaps more helpful to think of anomie, not as a *lack*, but as a *mismatch* of norms.

While Stauffer (2015) mainly approached ethical loneliness in the context of political injustice and extreme human rights violations such as torture, as a concept it seems particularly relevant when thinking about loneliness and autism. Autistic people are routinely ‘othered’ in macro- and micro-social ways, as was highlighted by the findings of

Sasson and colleagues' (2017) study described in Chapter X (Section 1.2.3), which showed that non-autistic people tend to form unconsidered, negative opinions about autistic individuals within the first few seconds of meeting them. Moreover, as is the case for all disabled people, autistic people are more likely than non-autistic people to suffer abuse of some form (e.g. Bargiela, Steward and Mandy, 2016; Haruvi-Lamdan et al., 2020; Stalker and McArthur, 2012; Sullivan and Knutson, 2000; Weiss and Fardella, 2018). Perhaps most importantly, autistic people already exist at a disadvantage in terms of experiencing social connection, due to the fact that the societal norms and values around them are often uncomfortably mismatched with their own. Long before one can consider the possibility of being rejected or hurt by society, the autistic person must overcome an inherent state of anomie in order to conceptualise social belonging in the first place. If you don't have similar 'thought processes' to those around you, if you can't find anyone to share your interests, if the norms and values of the people around you seem alien: it is hard to feel that you belong.

It is the promise of meaningful engagement with others, and the promise that previously ignored voices will now be heard that is most important, according to Stauffer (2015), for establishing trust in a world rife with systemic oppression. This healing, restorative process, involving radical conceptual change about who matters, who is safe, and who belongs in the world following an instance or period of profound disconnection from it, she termed—you may recall from Chapter C—'world-building'. World-building cannot be done alone: there must be the hand of another reaching out towards our own outstretched palm; or as Stauffer (2015: 19) neatly summarised: 'my sovereignty depends'. We live under the illusion that we are independent, sovereign entities but the maintenance of our individual wellbeing and our very existence is dependent upon an interconnected web of human, (and, arguably, ecological) relations. Never, perhaps, has this been more tangible than at this time of writing, under the shadow of a national 'lock-down' response to a global pandemic. Our shared vulnerabilities are exposed and around the world we are suddenly all aware of how the health of one, eventually, affects the health of all.

For a few days, Talking Together saw people—strangers—come together and share in their experiences of loneliness. People dared to speak, and dared to listen. Where loneliness represents 'an emotional hunger for intimacy [and] meaning' (McGraw, 1995: 44), meaningful connection with others is rich nourishment. In Binnie's (2019) *Writing Back*

project, where she partnered members of the local elderly population with student pen-pals as a means of collecting qualitative data around loneliness, she found that by engaging in the correspondence both demographic groups experienced a positive influence on their mental health. The simple act of connecting with another human being, and feeling heard by another, can be a potent remedy; in Stauffer’s terminology, this becomes a small act of world-building.

This sentiment was reflected in the follow-up sense-making workshop that took place nine months after the original sessions. As in the original sessions there were tears, and the general agreement that it had been “a gift” to be able to share the burden of their loneliness with another person. One non-autistic participant (‘B5’) who had attended the sense-making workshop described how a “weight had been lifted off her shoulders” to be able to admit something she was usually ashamed of (i.e. being lonely) to someone else, present and ready to listen. Many felt that talking to a stranger made the experience both easier and more profound. Starting a conversation with anyone, taking time to think about why you were lonely and telling someone else that you feel lonely were three of the ten strategies identified within the BBC Loneliness Experiment to combat loneliness (BBC Radio 4, 2018). Talking Together created an opportunity for these three things—and many more—to occur.

3. Mutual manifestness and (shared) understanding

The original strategy for the primary linguistic analysis of the data was to comb through each conversation, seeking out instances of communication breakdown. These instances would be analysed through a lens of relevance theory as per the example set by Jagoe (2012, 2015), in her novel work exploring mutual manifestness in the context of schizophrenic, delusional talk. Yet this approach soon proved itself unworkable on account of the (wholly unanticipated) fact that the conversations contained very few instances of non-understanding: something that is reflected on further, in Chapter D. What *was* evident, however, was that there were immediately discernible qualitative differences between the conversations held by cross-dispositional pairs (i.e. A + X; A + B) and those by the exclusively autistic dyads (i.e. A + A). The codes and resulting motifs (as described in Chapter M, and shown in Appendix 12), were developed as a means of trying to capture this

difference, and within these following pages, ‘purposefully selected extracts’ (Watts, 2013) are provided alongside their analyses.

Conversations are presented below in four suites of five (i.e. Suite One includes: **A1** + X1; A2 + X2; **A1** + A2; **A1**+ B1; A2 +B1), so as to best focus on the communication of each core ‘A’ participant across their three different conversation pairings. Within each suite, extracts are presented where they are relevant to the primary motifs in the following order; 1) *flow*; 2) *tuning-in*; and 3) *running along the edges of meaning*. The first and second motifs are closely related to one another and so some extracts may, at times, represent both. For that reason, *flow* and *tuning in* are considered together for each suite. For some suites there may not be extracts representing all three motifs. Extracts belonging to the fourth, smaller motif of ‘*mutual manifestness*’ are woven throughout each suite where appropriate. Section 2 closes with a summary of the patterns that can be seen across the four suites and the full set of 20 conversations: together in symphony.

3.1. Suite One

Conversations 1,2,3,4 and 5, featuring core participants A1 and A2.

A1: Autistic male with additional learning difficulties, in his 50s ⁴¹

A2: Autistic female, mid 30s-mid 40s

3.1.1 Suite One *flow* and *tuning in*

Monologic turns featured prevalently in this first suite of conversations, particularly in Conversations 1, 2, 4 and 5. In Conversation 1 (cross-dispositional, between A1 and X1), A1 appears to stumble over constructing his turns. His speech contains numerous fillers,

⁴¹ All following ages are given as a rough guide based on my researcher observations and discussions with the participants

pauses, stuttered words and rephrases which means that it takes him extra time to arrive at his intended points.⁴²

21 I felt very lonely.=((sniff)) You know
22 cos er you know () you know I didn't
23 have any coⁿne^ction_
24 Yeah
25 er because of-of erm ((sniff)) erm .h
26 me living on my own,
27 You know and er you know de sometimes
28 I use=I mean I don-w-wouldn't do it
29 but because of er my loneliness
30 ((sniff))(0.7) I'm not saying I don't
31 (0.5) FEEL lonely still but it's:ss
32 not-not-not as ba::ad because erm I've
33 got the support that I'd-I've got a-a
34 sup^uport network_

X1, a work colleague of A1's who agreed to come along and participate, is familiar with A1 and is patient with these long, sometimes laboured turns, creating a conversation where A1 has room to speak, but one that is essentially lopsided. This asymmetry also carries over into the content. For example, early in the conversation (in lines 72-89), after speaking candidly about the depths of his loneliness, A1 shares that he has experienced moments of suicidal ideation. X1 responds with an anecdote about a friend of his who had expressed similar feelings but went on to become a window-cleaner. This response offers a contribution that is technically relevant, but not especially personal: a pattern that remains throughout this conversation. Similarly, later on (lines 146-147), when A1 is distracted by the sound of a

⁴² As described in Chapter M (Section 3.1.4), for each extract from a transcript, the left column represents the speech of the A participant and the right column their interlocutor. Where two As are talking, the As are organised in numerical order (e.g. in Conversation 3, A1 is to the left and A2 is to the right).

voice in the corridor outside of the room, X1 directly requests A1's attention in a manner one might expect from a parent to a child:

```
146   Yeah and that's why ((creaky high  
147   pitched laugh as third party speaks))   >Stay with me<
```

In Conversation 2 (cross-dispositional, between A2 and X2) there is a greater sense of balance in terms of turn-taking and personal contributions, but the turns are still often very long (one turn, for example, lasts 45 lines). Again, there are a lot of pauses and gaps, particularly in the first few minutes, and episodes of parallel dialogues where each speaker acknowledges the other's contributions but continue with their own separate topic when the turn passes back to them (e.g. lines 117-119; 140-145; 201-215...). Despite A2 introducing X2 as her friend, and them clearly having good knowledge of each other's day-to-day, the dialogue is rather staid. The conversation remains on a theoretical, intellectual level about the nature and causes of loneliness with not one moment of laughter, enthusiasm or signal of affect throughout.

In stark contrast to this, then, is Conversation 3 (matched-dispositional), where A1 and A2 meet. Immediately, the conversation flows better and continues to do so. Within moments of beginning their conversation together, A2 correctly predicts what A1 is aiming for, and helps him get there:

```
17   (2.7) I feel lonely (.) ↑BEing there=I  
18   feel on the- I feel'd                               Bit on the edge_  
19   On-on the edge [y-y-yeah] all the time             [Yeah yeah]
```

Rather than the parallel dialogues of the previous conversation, this one continues to develop through a coherent progression of adjacent turns. Where both A1 and A2—for different reasons—had tended towards long turns in cross-dispositional (familiar) Conversations 1 and 2 (and again in unfamiliar, cross-dispositional Conversations 4 and 5), here they fall into a fluid rhythm of shorter, responsive turn-taking.

Genuine rapport appears to build too, demonstrated by the mirroring of anecdotes and enthusiastic mutual agreement (e.g: ‘Yeah, yeah, definitely, me too’ – line 38; ‘Exactly exactly exactly’ – line 229; ‘Yeah exactly yeah yeah yeah yeah’ – line 289). In Conversation 2, A2 sat back when her interlocutor (X2) spoke, giving only minimal backchannel cues (‘mmm’; ‘yeah’). Here she is more engaged, making contributions that can be understood as enthusiastic, further indicating rapport:

323 They don't even talk to you.
324 Yeah
325 You know they think you know what are
326 you talking [to ↑me for.] [No I think that is too:oo.]
327
328 And you know-d (.) I feel you know
329 I feel-d er b-ba:ad about that
330 [You know-d] er you know it's (0.5) [Yeah]
331 it's a lonely bus journey because

The same topic is met with limited engagement in both of the cross-dispositional interactions. In Conversation 1 (with A1’s familiar conversation partner) the reference to his dog is something of a non-event, although it could be that the dog is already known to his interlocutor (X1) and its mention not especially newsworthy. However, when his pet is introduced in Conversation 4 to B1—a (non-autistic) stranger to A1—there is also a distinct lack of engagement:

94 But I-I don't know what SCALE of
95 loneliness it-it is cos no one's ever
96 done a .hh a-a e-e cos o-obviously
97 I've got a do:og.
98 Mmm.

The focus on the topic of his pet could be framed as evidence of one of the diagnostic features of autism: the presence of ‘highly restricted, fixated interests’ (DSM-5, American Psychiatric Association, 2013). Monotropism theorists (see Chapter X, Section 1.2.2), however, have long reframed these intense absorptions—sometimes manifesting as encyclopaedic knowledge of a specific subject—as highly aroused interests within a monotropic attention tunnel rather than a cognitive deficit (Murray, Lesser and Lawson, 2005). As such, and as Wood (2019) has argued, the negative terminology that exists around ‘special interests’ and that is used in the DSM-5 pathologises a potentially rewarding mode of engagement with an object of interest.

Special interests have been found to have both a positive impact on subjective autistic wellbeing (Grove et al, 2018; Milton and Sims, 2016) and to function as a supportive tool for engagement in schools (Wood, 2019), and yet there is only fragmented literature on the positive function that these kinds of intense interests may have for autistic people in a social context. Koegel and colleagues (2013), for example, found that incorporating special

interests into regular extra-curricular activities could support the social engagement of autistic students with their typical peers to the benefit of both parties. While this is useful to know, it represents an interventionist approach focused on uniting autistic and non-autistic peers: it does not capture the organic development of autistic rapport around a shared special interest. Rosqvist (2019: 8), in her ethnographic study of ‘different meanings of being social among autistic people who are employed at an autistic-separate workplace in Sweden’, found two different types of sociality occurring. The first kind, taking place in environments dominated by non-autistic people and referred to as ‘socially-based sociality’ by her participants, involved small talk, socialising for the purpose of developing work-based acquaintances and networking. In contrast to that and within autistic-only environments, the primary mode of engagement was what she called ‘interest-based sociality’:

..[I]nterest-based sociality should here be seen as intrinsic group sociality, as a motivator and a driving force for social interaction within a group and a sense of belonging within a community. It includes the importance of having interest-based exchanges with one another, and having common interests and communication based on genuine interest in the topic being discussed (Rosqvist, 2019: 176).

The exchange about his dog in the matched-dispositional Conversation 3 seems to fit this description. A1 offers up a special interest that is of great importance to him and it is both recognised and reciprocated by A2 who is also passionate about her own dog. It would be tempting to assume some linear correlation between the engaging in a passage of autistically-satisfying interest-based sociality and the ensuing high affect and flow that characterise this conversation. However, the synchrony was already occurring before this episode: there was already some degree of *tuning-in*.

In this first suite of conversations, ‘converging’ as a method of developing intersubjective attunement came up as a significant theme. In (familiar and unfamiliar cross-dispositional) Conversations 2 and 5, A2 demonstrates eloquence and the ability to deliver considered opinions informed by current affairs. Her turns can be long, but feature very few restarts. In Conversation 3, A2 converses with A1, an autistic man with additional learning difficulties

who seems at times to experience difficulty formulating his points. In this conversation, not only are A2's turns shorter, but also the content is broken down into shorter segments, focused more on her own personal experiences, without the false-starts and pauses that typify A1's speech:

265		Because I think it's a cos it's such a
266		<u>commuter</u> town as well people don't like
267		they not really have a <u>community</u> there
268		.h maybe they .hh they kind of they go
269		to <u>London</u> and they do their job and then
270	[and they come back y-yeah]	they come in [and they're on their town]
271	[yeah-yeah]	[in their single] person's flat and .h
272		this and they don't too tired to do
273		anything on the <u>weekend</u> and then there's
274	Y-y-yeah	no kind of <u>community</u> .hh so ↑I used to
275		commute so I know that that can be like
276		that you know it's () <u>lonely</u> .

In (unfamiliar, cross-dispositional) Conversation 4, where A1 meets non-autistic stranger B1 (a male Masters degree student in his mid-twenties), this kind of convergence does not take place. B1 approaches the topic with a kind of technical precision and higher register that A1 cannot match (“So we need more specifics on exactly what the problem is here rather than just treating it as a broad issue” – lines 43-45; “loneliness can be sort of suppressed or, kind of, redirected in people who are of a more median age” – lines 69-70; “the problem with a study is, of course, it's purely subjective”; “I think that that's the common conception of students” – lines 169-170).

As with the failed attempt, mentioned earlier, to engage B1 with A1's topic of special interest (his dog), attempts at humour are also lost:

5 NO YOU st-↑you start off d-d-DO the
6 bottom one yeah.
7 ↑O↓kay (0.7) the one about strangers
8 talking to each other.
9 fer-yeah cos we're strangers aren't
10 weɪ.
11 (Or)
12 ɛYeah cos we've never met before ↑have
13 weɪ.
14 I think-I think that's er (0.5) that's
15 almost a solution to the ↑SEC↓ond one=to
16 the (.) ↑sec↓ond middle question so er

Awkwardness is one of the criteria commonly associated with forming first impressions, and is one that autistic people are often rated poorly for (see: Chapter X, Section 1.2.3). Such evaluations lead to thin-slice judgements against autistic people in the form of an unwillingness to engage in conversation with them, and a degree of discomfort being in their close proximity. Despite the moments of awkwardness that are present throughout this conversation, both do manage to share something of their personal experiences and maintain the full ten minutes of conversation without lapses or breakdowns of understanding. It is simply the case that these speakers are neither on the same wavelength nor able to get there.

3.2. Suite Two

Conversations 6,7,8,9 and 10 featuring core participants A3 and A4.

A3: French-English bilingual autistic female, in her 50s

(X3: A3's chosen conversation partner, is also an autistic female, in her 50s)

A4: Autistic male, in his 50s

3.2.1 Suite Two flow and tuning in

Suite Two continues with the presence of heavily monologic turns. Conversation 6 (familiar matched-dispositional between A3 and her chosen conversation partner X3: an autistic friend made through Assert), for example, has an opening turn of 37 lines, peppered only by X3's minimal backchanneling ('mmm, hm mm').⁴³ While A3 does tend to dominate (in all three of her conversations), X3 also inclines towards longer turns. At the end of A3's long opening sequence, having invited a response from X3 ("I don't know about you?" – lines 36-37), X3 then goes on to hold the floor for a 60-line extended sequence (lines 38-98).

'Monologues' are one of the examples given under the diagnostic criteria relating to a 'failure of normal back and forth conversation' in the DSM-5 (American Psychiatric Association, 2013). While such one-sided verbosity may seem at odds with maintaining conversational *flow*, in this conversation at least, it does not appear to cause significant disruption. This may be because, as McDonnell and Milton (2014: 44) have asserted, autistic people 'will often feel more in their flow when engaged in monologues or serial monologue style conversations [...] a practice sometimes engaged in when people on the autism spectrum talk to one another'.

Despite the length of each speaker's sequences, the other remains engaged throughout with clear rapport, demonstrated by lots of backchannelling, and mutual, enthusiastic agreement. During a passage where X3 is describing how she has found the city much easier to navigate during moments when traffic has been stopped, there is a moment of mirroring of the word 'kindness'.

⁴³ This conversational condition was unique to A3 as her chosen interlocutor happened to be autistic, unlike the chosen partners of the other core participants.

the café might be: it is mutually manifest to both A3 and X3. It is because of this that neither needs to spell it out.

In Rosqvist's (2019) paper reporting on different types of sociality in a Swedish autistic work programme, she quotes one participant discussing the different ways that autistic people can approach (what, in Chapter F, was called) cross-dispositional communication:

When autistics feel that their communication does not work with the outside world, different behaviours develop. One might not say anything at all. Another is to talk incessantly, just drag on in some way. Throw something out there until you make some contact... ('Alice' in Rosqvist, 2019: 174).

Conversation 6 shows two speakers who are closely attuned. Their monologic turns do not disrupt the flow, perhaps because of the adjacency: both speakers are inclined to take them. This conversation has its own rhythm, its own flow and a sense of symmetry. Progressivity, here, is not rushed; each speaker allows the other to go on whilst maintaining the thread. Perhaps it is even *due* to the fact that both speakers share what can be a characteristically autistic style of monologic turns that this mutual understanding and synchrony forms so effortlessly. There is a natural, structural coordination that supports the building of 'we-ness'.

Conversation 7, between A4 and his non-autistic wife, X4 (familiar cross-dispositional condition) presents a very different conversational dynamic. This conversation, for the most part, involves fairly equal, short and fluid turns. Yet despite this, attunement, rapport and mutual understanding appear to be low throughout. Unique to this conversation is the proliferation of questions posed to check that they have been understood by, and have properly understood, the other (e.g. "Is that right? Is that what you're saying?" – X4, line 21; "Are you talking about..." – A4, line 86; "...does that make sense?" – A4, lines 130, 187; "do you know what I mean?" – A4, lines 314, 321-322; "You want me to tell you..." – X4, line 136). This type of checking in is indicative of interlocutors who wish signal investment in mutual understanding, and demonstrate their care and attentiveness. However, combined with the moments where A4's attempts at humour fall flat (e.g. lines 101-102;

114-121; 137), it might be interpreted as representing two individuals who are struggling to connect. Instead, my interpretation is that it is reflective of the fact that these interlocutors have a long personal history together and have perhaps learnt that in order to understand one another, extra effort must be made. They may know that they often don't understand each other at the first pass and are keen to monitor mutual understanding as conversation progresses.

In support of this is the fact that these speakers, even in these short ten minutes of dialogue, describe very different lifeworlds. A4 prefers to spend time by himself, he hates parties and struggles to get a handle on what loneliness would feel like. X4 takes pleasure from socialising, she likes participating in organised groups and clubs and comes across as very in tune with her own feelings. While it may be the case that they have a lot of shared life experience together, their subjective experiences of the world—their dispositions—sound very different.

Their difficulty in achieving mutual understanding becomes most clear around lines 206-269 where they appear to really struggle to understand what the other means, particularly around the definition of 'loneliness'. A4 has repeatedly been saying that he doesn't 'know what the word loneliness means' (line 128) or what it 'feels like' (line 134).⁴⁴ X4 seems to believe A4 just doesn't experience it (97-101) as he doesn't need the company of others. From line 222 they fall into trying to define the concept of loneliness. X4 attempts to tell an anecdote describing a moment in which she felt lonely. A4 argues that what she is describing isn't 'loneliness'. Suddenly the pace changes and where there was a balanced, measured exchange there are now rapid, over-lapping turns:

⁴⁴ This kind of response would be typical of an individual with alexithymia: a condition relating to the 'difficulty identifying and talking about your own feelings' (Happé and Frith, 2020: 10) that frequently co-occurs with autism (and is discussed in Chapter F, Section 2.1). The presence of such a condition, particularly if unidentified, would likely contribute considerably to difficulties in mutual understanding.

222 T- ah that's more like isolated though
 223 isn't it?
 224 .hhh O(hhh) or awkward might be not- not
 225 be the word lonely.
 226 Yeah see loneliness [it's a] sort of [Yeah I get that-]
 227 l-lo:::ong term empty [longing you [Yeah I felt
 228 know.] unsettled] at a recent colleague's
 229 wedding because you didn't come with me.
 230 And you were like 'ang on I don't
 231 [really know anybody here_] [And-and it was only] half my team and
 232 they all got fcompletelyf drunk within
 233 [But that's not-] five minutes [() ridiculous]=↑no no no
 234 but-
 235 =That's not loneliness.

As this sequence continues, A4 increasingly takes the floor until he interrupts X4 as she begins to respond, in line 269, and more or less continues in monologue form until the time is up, with very little further input from X4. Rather than this being a case of giving A4 room to express his confusion and opinions on the matter, it appears, rather, as if X4 is withdrawing from engagement. Where the conversation has previously been fairly symmetrical, in terms of turn-taking, X4 just stops contributing. In line 301, A4 ends his turn with a question ('lots of those people will be students wouldn't they?'): creating an invitation for X4 to respond. She, instead, replies with a quiet backchannel 'Mm hm?', providing the minimum indication that she is listening, but also that she has no intention to engage further. This lack of understanding over what is quite a central issue to this conversation (loneliness), and this inability to synchronise leads not only to a breakdown of mutual understanding but a powerful breakdown of *flow*, and possibly, for this brief moment, rapport.

Conversation 8 (unfamiliar matched-dispositional condition) where A3 and A4 meet could not be any more different. Here again, like in Conversation 6 (between A3 and X3), two speakers with the potential for long turns are engaged in conversation, but it seems to *flow* effortlessly from the outset. There is a pace to this conversation, with over-lapping turns that seem to be borne of enthusiastic backchanneling and mirroring of what the other has said, often becoming direct echoing of words or phrases:

26 NO NO NO not syste[matically] [or possibly]
27 possibly yeah.
28 Possibly erm .h the †thing is like I

111 =I could work it out.
112 I w- I can work it out [which never] [Yeah]

250 It's escapism from-
251 =It's escapism yeah [I love seeing ()] [But]

42 So: I started #er:rr# looking in
43 other ways to distract myself so (0.5)
44 thank God I had ADHD [kind of] [((Wheezy laughter))]
45 because then I [could KEEP MYSELF] [It entertained you.]
46 () ~~ENTERTAINÉ~~ MYSELF.

Most striking about this conversation, however, and most indicative that these speakers are *tuning-in*, is the immediate and enduring presence of humour and shared laughter. Across almost every page there are bursts of effusive laughter from one or the other or both; it is impossible not to become infected by their mirth as you read their exchanges. Sometimes from jokes, other times from what seems like affectionate (and well-received) teasing, the humour expands a sense of ‘solidarity’ and rapport in which a seemingly genuine, deep personal exchange was able to take place (both participants also shared how moving and surprising they had found the experience shortly after recording).

This use of humour to draw an interlocutor into synchrony contrasts with the way in which humour is used by A4 in Conversations 7 and 10. About a quarter of the way into Conversation 7, X4 is talking about some of the research findings from the BBC Loneliness Experiment that had been provided as prompts. She is explaining how having regular contact with other people helps reduce loneliness and she suggests that it helps people to live longer too. A4 asks if X4 means that just talking to anyone stops people feeling lonely, and X4 replies with a comment that is seemingly (and probably intended as) neutral but that carries potentially derogatory connotations about autistic people’s assumed lack of interest in others.⁴⁵

97		Well ↑may↓ <u>be</u> (0.5) but maybe that is
98		<u>different</u> for someone with autism because
99		if you’re not (.) that interested in
100		other <u>people</u> (0.5) you don’t need <u>company</u>
101	[Are you also saying loneliness	(0.5) and [then you wouldn’t <u>be</u> lonely.]
102	kills_] f.h hE	
103		Well this was the <u>study</u> .

⁴⁵ See Chapter C, Section 1.1. for discussion of the social motivation hypothesis of autism and its criticisms.

A4 ignores this assertion and attempts a joke around the fact that (in lines 92-93) X4 has proposed that regular contact with other people supports longevity. It's not really much of a joke, and it isn't acknowledged by X4, but it seems to function as a means of deflecting X4's proposition. Similarly, in Conversation 10 (unfamiliar cross-dispositional condition) with B3, A4's humour predicts and then undermines B3's earnest attempt to talk about her recent mental health difficulties and the reason she wanted to contribute to these conversations about loneliness:

40 Mmm.
41 .hh but erm (.) so I-I hope I can like
42 say something.
43 M(h) h h h ((squeak snort of
44 laughter)) profound [about] [YEAH]
45 loneliness.

Following this deflective response, B3 ends her attempt to talk about the loneliness she had recently experienced (as the topic she has introduced has not been taken up) and A4 takes the floor to manoeuvre the conversation away from potentially emotive content to a shallower sequence about loneliness facts and statistics. These uses of humour to distance are reminiscent of the autistic boy Aaron's "or else?" move, when faced with requests for behaviour he did not care for (described in Chapter C, Section 3.1), as a means of 'launching a new language game' (Sterponi and Fasulo, 2010: 124).

Humour, then, is utilised in different ways by A4 in these different conversational contexts to achieve different ends. In Conversation 10 (with B3), he is diverting the undesired direction of the conversation, moving it away from the potential intimacy with a stranger. In Conversation 7 (with X4) it comes across as slightly mocking, if affectionately. In Conversation 8 (with A3) humour seems to rise up as a natural exuberance, indicative of the spontaneous rapport. But it would not be fair to say, for example, that A4 consistently

employs humour to avoid challenging emotional content, for in Conversation 8 he leaves compassionate space for A3 to weep, and to share some of her childhood trauma:

179 I had that when I was five yea- like
180 the worst of the wor:st and I would
181 I was in agony inside is when I was
182 and I can picture the little girl on
183 the STEP_
184 (2.0) °Aw°
185 ~h~ ((Crying)) ~WATCHing all the KIDS
186 ~ h and WANTing to be part of it (.)
187 and I never could? ~
188 (1.0)
189 ~So IT'S [LONELINESS] YOU'VE GOT one [°I'm sorry°]
190 (2.7) and [aLONE] cannot AND YEAH that [°↑Mmm°]

While A3 finishes her story over the following ten lines, A4 just quietly listens. There is no awkwardness: no attempt to interrupt or disrupt the flow with deflective humour and no stilted pauses when she has finished. This kind of muted response on the part of A4 might have been historically interpreted as evidence of an autistic lack of interest in the feelings of others. Yet this moment does not represent an absence of affective empathy. It is a moment of deep listening: of 'daring to go on' (Sterponi and Fasulo, 2010) with A3 and her intimate sharing. It is a precious moment of world-building.

3.2.2 Suite Two running along the edges of meaning

Directly following this moment of sorrow, A3 completes her turn (line 200) by explaining that her coping method, as a young child, was to turn to books. A4 responds by offering his own parallel anecdote, telling A3 how he also read a lot as a child, and used it as a way to access fantasy worlds: "faraway lands and magic and stuff that was all miles and miles away

3.3. Suite Three

Conversations 11,12,13,14 and 15 featuring core participants A5 and A6.

A5: Autistic female, mid 30s-40s

A6: Autistic female, in her 30s.

3.3.1 Suite Three flow and tuning in

Suite Three also features two core participants (A5 and A6) who demonstrate a tendency towards long turns. In the case of A6, her longs seem to occur as a result of her labouring a little over formulating concise sentences. Like with A1's speech, there are false-starts, fillers, re-phrasings, multiple pauses occasional stutters when we first meet her in Conversation 12 with X6 (familiar cross dispositional condition):

24 Yeah.
25 (0.7)
26 .h I guess I wondered whether or not
27 jus:t because of the: increase in: .h
28 (h)a the number of (0.5) people of
29 that age group living with (.) either
30 still living with their family or
31 living with other people of their
32 age group (.) [.hh] whether or not [Mmm.]
33 (0.7) I-I mean obviously it didn't
34 (.) decrease lonelin- have a
35 significant impact on loneliness but
36 THAT'S the only thing that kind of
37 sur↑prised me about it↑ cos I was like
38 .hhh oh I wondered whether or not that
39 would have an impact on (.) h

40 loneliness=but then I suppose the-the
 41 the ogger issue is that if you're not
 42 one of those people who's .h living
 43 with (0.2) or-or that I-either those
 44 erm family or friend situations aren't
 45 working out [or] if they are erm .tch [Mmm.]
 46 if they erm (0.7) or if they're just
 47 not in place for whatever reason like
 48 erm .hh er you (1.0) are-are living on
 49 your own for for a different reason
 50 than actually .h other people living
 51 in multiple occupancy houses and
 52 seeming to be .h going out and having
 53 FUN all the time like [(0.2)] erm [Ye:ah_]
 54 might actually increase those feelings
 55 of loneliness.
 56

These features all combine to stall the flow of A6's speech and the pace of the exchange. Where A6 frequently interjects with supportive or enthusiastic back-channelling when her friend (X6) is speaking (e.g. "Yeah yeah" – line 60; "Sure" – line 66; "Yeah that's true" – line 109; "Oh that's really cool" – line 306), X6 tends to sit back when A6 is engaged in formulating a long, sometimes meandering turn (e.g. lines 331-363). On first glance this may seem like disengagement, but this conversation also features some moments of affective coordination in the form of shared laughter and cooperative sequences where both parties' turns build towards a shared perspective (e.g. lines 137-159).

Conversation 15 (unfamiliar cross-dispositional condition, where A6 meets B4) provides a useful point of comparison. There are (just) a couple of moments fairly early into the conversation where B4 interjects while A6 is speaking. These interjections are phatic agreements, but because they are more substantial than X6's simple "Mmms" (in Conversation 12) they require more processing effort.

112 at a table on my own [I feel really] [Yeah I couldn't do that.]
 113 uncomfortable with?=#Erm# (.) and I
 114 know that some people are really
 115 comfortable with that and like self-
 116 assured enough to do that and stuff .h
 117 and it's just something where I know
 118 that I would be analysing too much (.)
 119 what other people may or may not be
 120 thinking [or wha-what] er::m (0.2) or [Ye:::s_]

On each of these occasions (lines 112-113; line 120; line 176), the interjection appears to cause A6 a disruption in her train of thought, triggering a stutter, a filler, a pause. Although the interjection in line 120 (“yes”) is only a single word, it is delivered elongated and with flat intonation, marking it as somehow salient and requiring additional processing effort to derive the non-propositional effects encoded (such as an implied attitude or an intention to take the floor). These moments where one is required to simultaneously produce an utterance and process an incoming one can be hard for individuals with a monotropic disposition (i.e. with tightly focused, rather than diffuse, attention). Particularly for those individuals who also have sensory processing difficulties—where parsing speech among a competing cacophony of other (potentially informative) sounds is challenging—a cognitive lag may ensue at moments of high-speed task-switching. These temporary derailments do not seem to affect the potential for rapport; several moments occur throughout Conversation 15 where laughter is shared and reciprocity is achieved (e.g. lines 151-155; 163-170; 271-275). These two conversations (12 and 15) together demonstrate that X6’s subdued interjections may be reflective of her familiarity with her friend’s need for space when constructing a complex utterance.

In A6’s second conversation (Conversation 13, the unfamiliar matched-dispositional condition with A5), A5 begins with a long turn of 52 lines, with no backchanneling from A6 whatsoever until line 26, and then only a handful of backchannels (e.g/ “Mmm” or “Yeah”)

triggers a second moment of ‘mind-reading’ a few lines later, where A6 is able to complete the sentence that A5 seems to be struggling to finish (lines 112-122).

From here the conversation flows immediately into a dense sequence of close attunement with overlapping turns where they are not so much echoing each other as speaking in sync:

123	Whereas I <u>see</u> it as my choi:ce but is	
124	it (.) my choice because .h this is	
125	<u>now</u> what I do?	
126		Yeah.
127	=Er-er::r like a (.) as you say	
128	coping strategy or like just a .h a	
129	w- a way [of .h yeah.]	[Or even as you] said with
130	[Yeah.]	the theatre tickets [it's] BETTER than
131	[vulnerable	putting yourself in a [vulnerable
132	position yeah]	position where] you might be
133	[pointed]	disap[pointed] by other <u>people</u> .
134	=YEAH exactly [yeah yeah_]	[yeah yeah_]

Most distinctive about this next phase of the conversation, however, is the dramatic shift in fluency of A6’s speech. The stumbles, the re-starts and the drifting and long utterances are almost immediately eradicated and in their place, there is now a concise, assured voice:

135		°It's interesting.°
136	Erm er so yeah I don't know [°er	[BUT IT'S
137	yeah°_]	GOOD that] you say that you've got more
138	[Yeah.]	friends now [cos you] obviously (0.5) are
139		able to (0.2) <u>accept</u> people as your
140		friends.

232 Yeah massively [so.] [Erm] but THEN AGAIN (1.5)
233 I guess that's the thing .h you use all
234 those social things as a kind of a
235 PLATform to meet other people and
236 [Yeah.] [hopefully] .h conVERT that into
237 [Yeah yeah_] Exactly_ relationships [of some] kind.
238 .h erm but it doesn't have to be that
239 way_

One possible explanation for this increase of flow of A6's own speech could be that this is now her second conversation so she has had time to 'warm up' and shake off any initial nerves associated with being recorded. However, as we saw above, her third conversation (Conversation 15) reverted to the earlier lack of fluency.

Shortly after the sequence above, the conversation passes through a further instance of shared, unspoken understanding in lines 259-261 (A5: "Yeah yeah you have to erm", A6: "You can kind of", A5: "Yeah"), where both speakers appear to understand what the other is referring to without either having to articulate it directly. The rapport, flow and attunement (in the form of backchanneling and agreement), remain until this conversation closes shortly after, as does A6's new-found ease of expression.

This high level of rapport, attunement and flow was not present in all of A5's conversations. Conversation 11 (familiar, cross-dispositional condition, between A5 and X5) lacked flow, on account of the protracted monologic turns taken predominantly by A5. Some rapport was present (evidence by moments of occasional phatic laughter, and consistent backchannelling throughout), but restrained by the somewhat 'professional' feel of the conversation. This impression came from the slightly formulaic progression of the conversation, framed by what appears to be the application, by X5, of active listening techniques such as demonstrating concern and interest ('interesting' – line 80; 'good point' – line 89);

paraphrasing what A5 has said ('Okay so you've made two really good points here I think. So the choosing to be alone, and the choosing to connect', lines 110-113); waiting to take a turn (during the long monologic turns, e.g. lines 1-25, 59-110, 150-211, 239-268, 274-298, 322-336); and offering parallel anecdotes to demonstrate understanding (e.g. lines 25-49). The purpose of such techniques is to create a sense, for the speaker, of being attentively listened to so that they might feel comfortable opening up. X5's role at Assert involves providing training and pastoral support for autistic members, and it is in this capacity that she knows A5 (recall that A5 had wanted to take part in Talking Together but had not had a friend or family member she could bring with her for this first conversation). It is likely that this mode of engaging with clients shaped how she approached the conversation with X5, and while this was successful in creating opportunities for A5 to talk about her experiences of loneliness, it created conversational asymmetry.

Conversation 14 (unfamiliar cross-dispositional condition) is A5's final conversation, and here it occurs with non-autistic stranger B4. In contrast to the long turns of Conversation 11 (with X5), it begins with a smooth sequence of shorter, interactive turns that flows easily, perhaps because she has come directly from the highly fluid Conversation 13 (with A6). Similar to the kind of subjective differences seen in Conversation 7 (between A4 and his wife X4), these two speakers describe very different lifeworlds. B4 likes "going out", to the pub or to gigs, ideally in large groups. She has had to work hard not to feel self-conscious being seen alone in public places (like a café). A5 tends to do things on her own.

Yet this pair acknowledged and approached their differences with a kind of warm curiosity. They ask questions of each other: not "have you understood me?" but "tell me more...":

```
25   yeah so does that is that because you
26   <didn't enjoy> u↑ni [or:: when you           [I really enjoyed it.]
27   got-]
```

**

77 .h so where did you find your tri:be
78 (0.2) since you've been a student=is

132 Really yeah_
133 But have you always had that sort of
134 (0.5) you've never like had that hang-up

Very early on in the conversation (lines 28- 29), B4 shares the observation that her experience of being a student was quite lonely. As she put it, she had not been able to ‘find her tribe’.⁴⁶ In offering up this information, B4 exposes a degree of vulnerability from the outset. Considering these interlocutors are strangers, this is quite a bold move and one that invites intersubjective alignment and rapport. More than that—and not necessarily knowing that this might be the case—it sets the scene for common ground. While it is not expressed directly by A5 that she too experienced difficulty a community with whom she could connect, it is a common theme of autistic experiences.

By the time we reach adulthood, autistic people's experience of "togetherness" has likely consisted of some combination of: being intruded on by other people wanting us to engage with them, when we don't share that desire; being interested and curious about other people, but finding them confusing and overwhelming to be around; trying to engage with other people, and having frustrating and unsuccessful encounters; managing to engage "successfully" with other people, and finding

⁴⁶ I would like to acknowledge that the term ‘tribe’ can be problematic, and potentially culturally appropriative. It is used here as a direct quote of the participant’s words and in the spirit with which they were uttered.

ourselves drained and possibly even damaged as a result of what we had to do to “succeed” (Sinclair, 2010: para. 3).

Here they have inadvertently arrived at a means of bridging two mismatched dispositions: by naming, early on, a feeling of un-belonging that it is likely they both can recognise. In Conversation 14 there is a far greater sense of *tuning-in*, as compared to the earlier conversation between A5 and X5. This conversation does not, perhaps, have the depth of pain attached that might constitute an act of radical world-building, as was seen in Conversation 8 (between A3 and A4) but with its rapport and affect and synchrony it establishes a sense of we-ness that might serve as a temporary community, with all the nourishment that that might bring.

3.4. Suite Four

Conversations 16,17,18,19 and 20 featuring core participants A7 and A8.

A7: Autistic female, early-mid 20s

A8: Autistic male, in his 40s

2.4.1 Suite Four flow and tuning in

This final suite begins with a conversation between A7 and her elder sister (Conversation 16, familiar cross-dispositional condition). Unlike many of the other core autistic participants, A7 does not dominate the floor with long turns: if anything the conversation is guided by X7 as she poses the questions and ventures points to discuss. The conversation lacks much enthusiasm or ‘spark’ and, listening to the recording, both participants speak in low, quite hushed tones with a consistently flat intonation. In addition to the frequent cross-talk there are regular gaps and lapses.

However, both interlocutors seem keen to engage with the other and progress the conversation. They each contribute and respond relevantly to each other’s utterances. Yet

304 feeling lonely I would say?
 305 Yeah (1.0) I just also try not to
 306 (0.5) do it too often [(1.0)] that's [Yeah_]
 307 the whole I always say I feel like a
 308 burden so I don't do it () [I do] but [I KNOW it's]
 309 I don't all the time.
 310 Yeah and that's difficult because (1.0)
 311 I've got (0.2) my family as well so
 312 (0.5)
 313 Yeah.
 314 Obviously you're part of my family h
 315 but you know what I meanf.

It's difficult not to feel a degree of pathos when reading this exchange. The lack of mutual understanding does not appear to stem from a lack of desire to connect. Here are two sisters who obviously care for each other a great deal, but dispositionally speaking they are so different and the gap between them, in this moment, is proving hard to bridge. While, in the above lines, A7 seems to be trying to voice a profound loneliness and a sense of not knowing how to reach out, X7 maintains the belief that A7 always lets them know when she is feeling lonely. What else can A7 really say other than "yeah..." (line 305). But A7 persists; having gone along with X7's expectation that she contacts them when she's feeling lonely, she explains that, nevertheless, she tries not to do it often as she feels like a burden. She tells X7 how she doesn't know what to do in those moments and repeats that she has "a paranoia" that she's "just a burden" (lines 317-318). As the conversation draws to a close, and following X7's suggestion that A7 should send a text or even call someone if she felt really lonely, A7 tries one more time to make her sense of detachment from others around her understood:

332 I just never know if anyone will
 333 answer.
 334 Yeah_
 335 (1.7)
 336 That is (0.5) the problem with phones as
 337 well these days isn't it it's like (0.5)

These speakers, here, seem to be talking at cross-purposes. A7 attempts to talk about the unreliability of people while X7 is talking about the unreliability of modern technology. While both focus on the topic of “unreliability” the speakers connect this to different subjects. The proposition that A7 is working hard to convey is not mutually manifest here, leading to a breakdown in mutual understanding, evidenced by the continued parallel interpretations. It may be that the concept that A7 is trying articulate is not one that X7 shares. X7 is translating what A7 is saying into the closest thing she has and assuming that this is what A7 wishes her to understand.

This all contrasts with the way in which Conversation 17 unfolds, where A7 meets B5 (unfamiliar cross-dispositional condition). As with all the Group B participants, B5 does not know that A7 is autistic. However and coincidentally, B5 has worked in social care for many years and has had some experience of working closely with autistic people in supported accommodation. This fact is worth mentioning as it may be that is it relevant later when considering the reasons for the *flow* that falls into place in this conversation with seeming ease. Unlike in Conversation 16, where it was prevalent, here there is no cross-talk. Turns are also well-balanced, representing a consistently fluid back-and-forth. While A7 still has pauses mid-speech—where she appears to be preparing the next part of her utterance—there are very few of the lapses and gaps that punctuated the earlier Conversation 15, with her sister X7.

For A5 and B4 in the same conversational condition (unfamiliar cross-dispositional), the discovery that they had both experienced difficulty in finding a community they could belong to, opened up space for shared solidarity. In the same way A7 and B5 also find several things in common, such as the invisibility to others of their deep loneliness (lines 174-183)

and an aversion to socialising in a context fuelled by recreational drugs (lines 115-138): something they describe as common in the local social scenes. Around lines 78-89, B5 shares the observation that—for her—one of the challenges of approaching new people is the fact that it’s hard to know for sure whether they are a “good person” or not. Although A7 does not volunteer any further contribution to this topic, she does agree emphatically. So-called ‘social naivety’ has long been associated with autism (Lai and Baron-Cohen, 2015), and instances of interpersonal victimisation (or ‘mate crime’) are unfortunately common among autistic people (Pearson, Rees, and Forster, 2020). Whether or not A7 has had direct experience of this herself, she is likely to be at least aware of the potentially increased risks.

Finally, a further similarity between the unfamiliar cross-dispositional conversations of A5 and A7 respectively (Conversation 17 and 14) is the way in which the opportunity for rapport and intersubjective alignment has been created by the sharing of some personal information by one of the speakers (that then also resonates with the other). B5, for example, talks about not having had a family growing up and how it means that she doesn’t “have people that I could just go to that just accept me and will listen to me” (lines 210-212). The sentiment expressed here sounds very similar to A7’s “I just never know if anyone will answer” in Conversation 16 (and, incidentally, echoes A1’s “when you phone it [the mental health helpline] no one ever answers”—Conversation 4). It is the ‘daring to go on’ (Sterponi and Fasulo, 2010) by making visible some private aspect of the self, that invites the possibility for mutual understanding on a deep level.

3.4.2 Suite Four *running along the edges of meaning*

In the conversations involving A8 there is a distinct lack of *flow*, although the extent to which *flow* is disrupted varies between conversations. There is something idiosyncratic about A8’s speech that can make it, at times, a little hard to parse as a reader: but in the real-time back and forth of each conversation his interlocutors do not appear to notice directly. Syntactically, A8 is adept. Likewise, he appears to have a strong lexicon. Structurally, his speech can jump at times between propositions that are less than perfectly coherent, but the disorganisation occurs most frequently at (and sometimes within) the level of a single word.

The precise nature of these errors is not clear from the speech sample available, and I had no access to any detailed assessment of speech and language. The errors may represent a developmental pattern of a speech sound disorder which A8 could have had since childhood. Speech sound disorders, while under-investigated in autistic people, have received increasing attention (see Wolk, Edwards, Brennan, 2016). Equally possible, however, is that these errors may be ‘paraphasias’: the term given to the presence of errors in an individual’s speech, sometimes as the use of wrong words (‘verbal paraphasia’), sometimes as wrong or switched phonemes (‘phonemic paraphasia’) or sometimes as half-correct words (‘neologistic paraphasia’: Millea, 2013). Although far less remarked on than, say echolalia, paraphasia is also associated with autism, and there appears to be several instances scattered among A8’s speech (e.g. ‘evything’ for anything, and ‘seeper’ for cheaper, Conversation 18, lines 67 and 135; ‘meed’ for mean, Conversation 20, line 68; and various wrong words, Conversation 18, lines 127, 215, 217; Conversation 19, lines 66, 86, 87; and Conversation 20, lines 69, 185, 286).⁴⁷

Seen on the page in black and white, these instances of word-level differences may jump out as odd or disruptive. Yet most of them are easily interpreted within the context of the surrounding utterance. At high-speed, given that a listener’s brain is already predicting what will be said before it has been spoken (Kikuchi et al, 2017), they may easily have gone unnoticed. It is likely, however, that they do contribute to the general stiltedness that colours these three conversations, not least because the occasional re-starts and re-phrases (such as with “se-, seeper...cheaper” – lines 134-156; “computer... computer... laptop... phone” – lines 7-88) indicate that A8 is, to some extent, aware of these mis-speaks and attempting to monitor them. To do this, whilst also following his interlocutor’s speech and crafting his own responses, is likely to add to the cognitive demand. It is little surprise that this might entail extra processing time in the form of pauses, gaps and lapses. responses.

A8’s first conversation (Conversation 18, familiar cross-dispositional condition) with his housemate and friend X8, lacks flow. It is not that it is lacking rapport; they show interest in each other, asking occasional questions and acknowledging what has been said. Their turns

⁴⁷ Here the word ‘wrong’ does not connote any negative judgement.

are also relatively balanced and there is minimal cross-talk. What there are, however, are a lot of gaps and lapses, along with frequent topic changes, and the opportunities to extend or directly respond to what the other has just said are often missed. Overall there is a sense of rhythmic awkwardness, as if both of them wish to keep the conversational ball in the air, but are finding it difficult to do so. For example, in lines 18-33, X8 shares an anecdote from when she had been out walking recently in the countryside and was greeted by a stranger. A8 attempts a parallel response about how similar things happen when he goes for a walk near where his parents live, but stumbles a little and his response lasts just three lines ('Yeah cos with my parents are they... you they... you know if you...go on a walk... there...most people say hello'). There is a short lapse, then A8 re-takes the floor ("But going back to London...", line 39). He proceeds to comment on something he has heard about London lacking racial integration, but it comes out clunkily:

"People with the same backgrounds stay together so like, whites would stay together and Asians would stick together and all that. There's no, like, I could be wrong but there's no re-interaction between mixed races..."

A8's intended point is clear (whether or not this is a social fact or not) but it touches on the uncomfortable with its not-quite-appropriate use of racial terms ("whites", "Asians", "mixed races"). X8 initial response ("Yeah, erm, definitely, erm, but I mean...") suggests a degree of minor discomfort, but she uses her turn to adroitly direct the conversation back to the topic of loneliness.

The sometimes abrupt topic shifts between turns seen in this conversation give the impression of two parallel dialogues that are maintained over several turns. This dynamic is far more pronounced in Conversation 20 (unfamiliar cross-dispositional condition), where A8 meets non-autistic stranger B6. Unusually for these conversations, it is not the autistic participant (here, A8) taking long, monologic turns but B6. From the outset, B6 dominates; his first turn is 50 lines long, interjected only by one "Mmm" in line 35. This becomes a pattern during B6's long turns, where A8 provides minimal backchannel support but does not direct the conversation. It seems possible that A8 lets B6 run on because he is not entirely

following B6's points. In his other conversations (18 and 19), A8 tends to interject yet during B6's extended opening turn, A8 does not make use of many and ample pauses mid-flow. When he eventually re-enters the conversation (line 55), he initiates a new topic where he explains how long he has lived in Brighton and who he knows here, punctuated by several pauses. He then acknowledges B6's previous contribution ('...but it's a, it's an interesting point what you made, erm- lines 58-60), but picks out the incidental mention of the word 'London' from 22 lines ago, rather than the B6's most recent point that he has experienced a lot of loneliness while being at university ('...but it's a, it's an interesting point what you made, erm, I mean the London, I don't go to London that often but I, they don't speak to each other on the tube they just listen to music' – lines 58-64).

In the moments throughout the rest of the conversation when A8 does step in and take the floor, it is usually to re-orientate the discussion back to a question related to the prompt cards (e.g. thinking about potential solutions to loneliness locally). In the same way that, in Conversation 18, A8 and X8 would acknowledge each other's contributions but attempt to pursue a new direction, this conversation only just hangs together in terms of coherence. The extent to which this may be related to A8's idiosyncratic speech and potential additional processing demands is something that can't be gleaned from these few conversations alone, but merits consideration.

Conversation 19 (unfamiliar matched-dispositional condition), where A7 and A8 come together, seems to have a more stable central point of gravity than A8's other two conversations. Here, the speaker's turns are roughly equivalent and the cross-talk that was prevalent in Conversation 16 (between A7 and her sister X7) is absent. As such, the conversation develops coherently, signifying improved mutual understanding. Because of this symmetry in turn-taking and progressivity of the conversation, despite still-present gaps, pauses and lapses on the part of both speakers, this conversation nevertheless seems to *flow*. The conversation begins with the pair cooperating, via a series of short turns, to establish a joint definition of 'loneliness'.

4 Mm-what does loneliness m- (.) mean to
5 you,
6 Erm (0.5) suppose it's actually quite
7 hard to define (0.2) but like (0.5)
8 M-I'm guessing like (0.5) on your own no
9 friends_
10 Yeah feeling like you don't have other
11 people_
12 Ye:ah.
13 Kind of (.)to support you °or° (0.7)
14 [yeah] feeling actually alone. [YEAH.]
15 Ye:ah.
16 (2.2)

A8 poses some questions for A7 (“have you ever experienced loneliness in Brighton and Hove at all” – lines 25-26; “do you know people or can you talk to people here?” – lines 36-37) that, although led by the prompts and, being closed questions, not especially conducive to fluid conversation, remain relevant and cohesive with the previous turns. Around lines 60-68 there is a brief moment where the flow and the mutual understanding breaks down a little. A8 introduces a topic shift, turning back to something he has discussed in all three conversations: the impact that social media might have on loneliness. This perseveration leads to one of his paraphrasias (“it’s not a physical manifold”, line 66) before A7 overlaps, drawing a parallel between A8’s point and something that someone else has said previously (assumedly in one of her earlier conversations). This is spoken almost as an aside, in fast hushed tones and A8 either doesn’t hear, doesn’t understand, or doesn’t know who A7 is referring to. This blip is easily repaired though, and they continue to collaboratively discuss the role of social media in social interactions for the proceeding 55 lines.

As this sequence ends, A8 shifts topic again, asking A7 whether she thinks things like meet-ups might help to address loneliness in Brighton and Hove (a topic that he attempts to raise

again in the subsequent Conversation 20 with B6, to no avail).⁴⁸ Fortuitously, A7 has some experiences with meet-ups, as she described in the earlier conversation with X7 (Conversation 17). This triggers a highly fluid exchange that continues all the way from line 127, where it was initiated, to line 228. This passage evolves naturally from meet-ups, to the time and money required to do them, to the working hours they both have, to how work in various sectors impacts on the ability to socialise. It is perhaps significant that the discovering of a shared interest initiated this extended, fluid passage of interaction. Finally, a number of pauses and lapses signify that the flow has finally run its course. In response A8 makes a final topic change—here, less abruptly—by announcing it (“ I can’t think of anything else, I mean, I also find that, changing the subject so...”, lines 234-237). The ensuing sequence of turns discussing local homelessness and loneliness continues until the end of the conversation.

What marks this conversation out from the other two in which A8 participates, is the fact that he is able to sustain focus and coherence for far longer stretches. Moreover, his contributions are more directly, as opposed to ‘proximally’ (Ochs and Solomon, 2010), relevant here. While there lacks the enthusiastic rapport that we have seen in some of the other pairings, there also lacks the awkwardness that is sometimes present in both Conversation 18 (with X8) and 20 (with B6). It is difficult to assess exactly what it is that makes Conversation 19 function more successfully. There could simply be some degree of luck in A8 introducing a topic (meet-ups) that has some resonance with A7. Given that the other topic-related sequences also run on though, there is probably something else occurring here too. In their study investigating neurodivergent intersubjectivity, Heasman and Gillespie (2019: 910) found that conversations involving only autistic interlocutors had ‘a low demand for coordination that ameliorated many challenges associated with disruptive turns’. It may be that here (with A7) there is implicitly less pressure for A8 to provide highly contingent contributions at all times and that this, ironically, allows him the space to provide them.

⁴⁸ ‘Meet-ups’ are a popular type of locally organised events you can sign up to online as a way of meeting new people in the non-digital world. Typically they involve some central theme (such as a reading group, a ‘stich and bitch’, an LGBT walking group, etc...)

Ochs and Solomon (2010) have the following to say about the presence of tangentially relevant contributions that can be common to autistic speech:

[t]he ability to interpret and anticipate conversational actions is a basic form of autistic sociality and a cornerstone of human sociality more broadly. The language games, as Wittgenstein calls them, become more difficult to play as the game entails acts of relevance based on interpersonal attunement, contextual implicatures, and nested topics related to an overarching theme across an extended stretch of discourse. High functioning children with autism or Asperger's Syndrome use their intelligence to learn to play these language games and they often get by with fully or proximally relevant contributions. Their impairments are subtle yet consequential. Like ships that pass each other in the dark, sometimes these proximally relevant remarks pass by interlocutors unnoticed. Sometimes they are generously accepted. But in the social world outside family members and teachers, the proximally relevant, somewhat odd comments of autistic children sometimes confuse and annoy interlocutors (Ochs and Solomon, 2010: 79).

According to Ochs and Solomon (2010), interactions become increasingly challenging the more that they are contingent on 'interpersonal attunement'. A8's language use is clearly idiosyncratic: more or less so at different times. Perhaps it is the case that Conversation 19, with A7, provides more possibility for interpersonal attunement on account of both speakers, here, being autistic. Recalling De Jaeger's (2013) enactive view of interaction ('participatory sense-making', in Chapter F, Section 2.4), the whole embodied organism (here, human) is seen as involving itself in cognition, understanding, and communication:

If sense-making is a thoroughly embodied activity, and we can coordinate our movements, perceptions, and emotions in interactions with each other, then, in social situations, we can literally participate in each other's sense-making (De Jaeger, 2013: 2).

To say that the presence of an autistic interlocutor (A7) may have created greater opportunity for interpersonal attunement is not, of course, to say that all autistic people function in the same way, or that there a distinct 'autistic disposition'. We have seen (in Chapter X and

throughout this thesis) that this is clearly not the case. It is quite plausible, however, that just the slightest increase in interpersonal attunement might reduce the cognitive load borne of having to run a background ‘translation’ of every turn or of each aspect of uncoordinated (i.e. unattuned) body language.

3.5. The Symphony

Looking out across the contours of the four Suites, some clear patterns emerge. The most striking of these is difference between conversations that involved two autistic participants (A + A) and those that involved cross-dispositional pairs (A + X; A + B). All five matched-dispositional conversations (Conversations 3, 6, 8, 13, and 19) are characterised by a significant (and sometimes dramatic) increase in *flow*, rapport and intersubjective attunement.. Conversations 3, 6 and 8 are coloured, brightly, by enthusiasm and affect. In Conversation 13, A6’s fluency dramatically improves. Conversation 19 is the only one of three where A8 was able to maintain prolonged sequences of engaged, coherent turns. In contrast, all but a few of the conversations with non-autistic participants lack the above, even when interlocutors were well-known—and had been for a long time—to the core autistic participant.

Despite the discussion (in Chapter F, Section 2) around cross-dispositional communication, such a stark difference in the quality of conversations between dispositionally-matched, and dispositionally-mismatched pairs was not really predicted. Yet perhaps it ought to have been. In a paper reflecting on the quality of an ‘autistic space’ (as one might find in certain autistic-led autism conferences and gatherings, such as ‘Autescape’), Sinclair (2010: para. 42) observes that ‘the "same planet" metaphor, along with metaphors about "speaking the same language" or "belonging to the same tribe," are very common descriptions used by autistic people who have had this experience of autistic space’.

As was seen in Chapter C (Section 3.2), in a study involving an information transfer task (Crompton et al., 2019b), autistic people both transmitted the necessary information more efficiently and experienced higher rapport when interacting with other autistic people. Similarly, in a further study by Crompton and colleagues (2019a), autistic participants

reported finding matched-dispositional interaction (i.e. with other autistic people) much more comfortable. Participants described reduced pressure to ‘mask’, a similarity of communication styles, greater flexibility around ‘what constitutes a ‘good’ interaction’ and an increased tendency for autistic interlocutors to ‘make interactions supportive and inclusive’ (Crompton et al., 2019a: 6).

Less common, but equally as important, are the moments where the gap between sometimes very different lifeworlds and dispositions are bridged. Conversations 1, 12 and 18, while low on *flow* and at times asymmetrical, demonstrate how the familiarity of an interlocutor (X1, X6 and X8) can be functionally supportive where the autistic speaker struggles. In these conversations additional processing time was given, interruptions minimised and mis-speaks forgiven. Yet it was during the conversations with non-autistic strangers (Group B participants) where some of the most surprising moments of connection and mutual understanding were made. In Conversations 14 and 17, both pairs of interlocutors managed to reach a state of attunement, flow and rapport through the establishing of affective common ground. In the first instance this was achieved through warm curiosity manifesting in frequent questioning about the other’s experiences, and in the second through the volunteering of personal information and emotional openness. In both cases, these participants may qualify as what we might call a ‘generous’ (Ochs and Solomon, 2010) or a ‘helpful’ (Van Der Henst, Carles and Sperber, 2002) communicator.

The above sounds a little like the ‘attitude of receptivity and openness reflected in communicative and cognitive strategies’ and the ‘generosity of interpretation’ discussed in Chapter F (Section 3.3) when describing the approach to interaction taken by knowingly cross-dispositional speakers (in this case English as a Lingua Franca users). In Conversations 14 and 17, speakers have moved their interaction into the borderlands between dispositions, and have reaped the rewards for their efforts.

The findings from the Talking Together project challenged expectations, as the anticipated breakdowns in mutual understanding occurred only very rarely, and non-consequentially. In that sense, directly applying the findings to the original hypotheses is somewhat challenging, given that breakdowns in mutual understanding, as predicted and described by the DEP, were central to them:

- 1) Relevance theory—and specifically the relevance theoretic notion of mutual manifestness—can make sense of what is happening on a cognitive level during the breakdowns in mutual understanding between autistic and non-autistic individuals, otherwise known as the ‘double empathy problem’.
 - 1a) These breakdowns can be explained in terms of being a ‘cross-dispositional’ problem.
 - 1b) A relevance theoretic account of these breakdowns directly challenges the long-standing characterisation of autism as a condition of impaired theory of mind.

However, what the data does illustrate is that conversation flows far more successfully within dispositionally-matched pairs (i.e. between autistic interlocutors). This effect occurred in all dispositionally-matched dyads, where four comprised two autistic strangers and one comprise two autistic friends. If we replace the word ‘breakdowns’ with ‘disruptions’ (...in mutual understanding), the findings from this study begin to have something useful to say in response to the primary hypothesis. If we go on to substitute ‘mutual understanding’ with ‘synchronous’ understanding (i.e. ‘disruptions in synchronous understanding’) now the findings become highly pertinent.

In Chapter F, a theoretical account was offered to outline how relevance theory might make sense of the DEP on a cognitive level. Cross-neurological communication was reframed as cross-dispositional communication, and parallels were drawn with users of English as a Lingua Franca. In this view, extra efforts were hypothesised as necessary to achieve fluid understanding with an interlocutor of a disposition significantly different from one’s own. Where ELF speakers are highly sensitised to the fact that they are communicating in a cross-dispositional context, this cross-dispositionality is mutually manifest. Speakers, accordingly, approach communication with a generosity of interpretation.

In those Talking Together conversations where flow was stilted, and rapport and attunement low, interlocutors were often more focused on their own experiences that they wished to share. It was those cross-dispositional conversations that dared to go on, that took leaps of faith, and engaged their interlocutor with receptivity and generosity of interpretation that were able to achieve fluid, synchronous (mutual) understanding. In terms of the final hypothesis (1b), the very fact of the high levels of mutual understanding and rapport-building that were achieved in these conversations challenge an impaired ToM account of autism. In the following Chapter (D), these findings are discussed further within the context of the broader literature.

Chapter D: Discussion

The central aim of this thesis was to undertake a theoretical cognitive linguistic analysis of autistic language use. The Talking Together project was devised to produce a small corpus of naturalistic conversational data between autistic and non-autistic adult participants, with a view to testing the explanatory power of relevance theory when it comes to breakdowns in mutual understanding (as formulated in the hypotheses, see Chapter M, Section 2.1.1). Section 1 of this final chapter reflects further on the findings outlined in Chapter R in relation to the wider literature. Section 2 discusses the strengths and limitations of the empirical work of this thesis and Section 3 outlines the novel contributions it has made.

1. Reflections on findings

The empirical part of this thesis sought to investigate the extent to which implicit expectations of mutual manifestness contribute to the breakdowns in understanding between autistic and non-autistic interlocutors that have traditionally been characterised as autistic pragmatic impairment. Eight core autistic participants engaged in three short conversations about loneliness: with a chosen, familiar conversation partner ('X'), with an autistic stranger ('A') and with a non-autistic stranger ('B'). Yet mutual understanding was unexpectedly abundant during these conversations, regardless of whether they involved the core autistic participant's chosen, familiar conversation partner ('X'), an autistic stranger ('A'), or a non-autistic stranger ('B').

One potential reason for the high levels of mutual understanding across all conversations may be that speakers, by virtue of self-selecting for the Talking Together project, had an intrinsic motivation to engage with the central topic (loneliness). If this is the case, it is not necessarily a limitation of the study. It points instead to the importance of creating engaging opportunities for interaction that harness an autistic person's interests in order to support communication, mirroring similar findings by Koegel and colleagues (2013) and Wood (2019) from educational contexts. This is further supported by the moments in these

conversations where the discovery of a shared intense by pairs of autistic interlocutors sparked significantly increased conversational flow and interpersonal attunement.

With hindsight, the task was designed in such a way so as to promote flow. It provided a challenge that required moderate skill (talking to a stranger), was goal-directed with clear and immediate feedback, had clear parameters and was, according to participant feedback, intrinsically rewarding. This is significant, and has implications for how we think both about supporting those with pragmatic difficulties, and promoting cross-dispositional mutual understanding. Rapport may be thought of as a type of optimal experience (Tickle-Degnen, 2006) and these findings seem to demonstrate the way in which rapport may, in turn, be generated from shared flow experiences. Activities—such as playing sports or music—that promote shared flow, also promote (and are contingent on) bio-behavioral synchrony (Feldman, 2010, 2016): the attunement of behavior and internal (including affective) states (Rennung, and Göritz, 2016). Designing conversational tasks that are autotelicly rewarding, yet defined by clear goals and feedback, are worth exploring as a useful template for bringing this kind of affective synchronizing into the verbal communicative domain.

Creating opportunities for interactions that are oriented around shared flow may provide less cognitively effortful environments within which to interact, making communication a simpler task for those who struggle with a fast-paced back-and-forth. When interlocutors are in shared flow, or ‘on the same wavelength’, the attention of both individuals involved is focused more narrowly on a shared task. In these conditions mutual manifestness is more clearly defined. Moreover, even in cross-dispositional pairs where there may, ordinarily, be divergent patterns of salience and differently organised concepts, the narrowing of the shared focus into a flow state minimises discrepancies and increases the chances of high-quality mutual understanding.

Intuitively, this is more easily achieved when two interlocutors already have similarly-organised minds. In the conversations reported on above, interlocutors built rapport, flow and synchrony far more effectively when both parties were autistic—even when they were strangers—aligning with the assertion by some autistic scholars that autistic people often find an affinity with other autists (Chown, 2014; Milton, 2020). These findings lend support to theories which suggest we get on best with people who have similar minds (Bolis et al., 2017; Chapman, 2019a; Conway et al., 2019; Conway, Catmur and Bird, 2019; De Jaegher,

2013; Fein, 2018) and, in turn, counter the classical ToM-deficit theory of autism. Moreover, some autistic participants (A1, A6 and A8) appeared to experience improvements in their individual communicative competence when engaged in exclusively autistic dyadic conversations. This potentially lends support to a monotropic theory of autistic cognitive processing which posits a higher cognitive demand when engaged in multi-channelled task such as social communication (Murray, Lesser and Lawson, 2005). In those circumstances where shared flow and increased mutual understanding make understanding less effortful (in both a technical relevance theoretic, and an intuitive sense), more cognitive resources are available for language production.

The synchronized narrowing of heightened attention is important and bears brief further mention. According to the theory of monotropism, the attention of monotropic individuals is not simply narrowed, but also sharpened (Murray, Lesser and Lawson, 2005; Murray, 2018, 2020). In states of ‘monotropic superdrive’ (Murray, Lesser and Lawson, 2005: 143) finer-grained details may carry heightened salience. There is a very specific *fizzling* kind of feeling that I experience uniquely when engaging passionately with another autistic or monotropic individual around something that is, or has temporarily become, a mutual ‘intense interest’ (Grove et al., 2018; Milton and Sims, 2016; Wood, 2019). Such conversations involve fast-paced, intense enthusiasm, time dilation, and a sense of knowing exactly what the other person is about to say. They are joyous, exuberant and often highly creative of new ideas or recognition of previous un-noticed patterns and associations. Many of these aspects were identified in the matched-dispositional conversations between autistic interlocutors analysed in the previous chapter. It seems possible, then, that when two monotropic individuals synchronise their ‘torch-beams’ (Murray, Lesser and Lawson, 2005: 140) of intensified attention, something like a hyper-confluence of cognitive environments may occur: a super-flow.

Returning to the unexpectedly high levels of mutual understanding in the Talking Together conversations, one further factor worthy of consideration is the fact that the interlocutors were strangers to one another in two out of the three conversations held by core autistic participants. During informal conversations in the waiting area, several participants remarked on the pleasure of talking with someone unknown and in the follow-up sense-

making workshop, B5 explained that she had felt ashamed by her loneliness and the fact that she was talking to a stranger made her more comfortable to share it.

The very nature of a stranger is that they are unfamiliar. When designing this study, I had expected to find that familiarity would support improved mutual understanding. Familiar conversation partners (friends or family members) would likely have more in common, and be more accustomed to their interlocutor's way of thinking and speaking, making it easier to correctly gauge mutual manifestness and achieve flow. This was the case in some instances. In Conversation 12, for example, X6 sits back and gives A6 plenty of room to speak, interjecting only minimally. In the later Conversation 15, we saw that B4's interjections disturbed A6's trains of thought and caused her to take long pauses and make restarts. In Conversation 18, X8 extends to A8 a similarly low demand for coordination as observed by Heasman and Gillespie (2019) in autistic group conversations, allowing non-sequiturs and abrupt topic changes and making an effort to 'go on' (Sterponi and Fasulo, 2010) with him. In many cases, however, mutual understanding, as well as mutual affect and flow, were developed between pairs of strangers: in all pairs of autistic strangers and in some cross-dispositional stranger pairs (Conversations 14 and 17). But why might this be so?

In their critical investigation of 'the normative pressures that are brought to bear upon sensory experiences that are considered to deviate from the ordinary', Jackson-Perry and colleagues (2020: 125) utilise Simmel's (Simmel and Wolff, 1950) philosophical characterisation of 'the stranger' status as a means of contextualising the divergent sensory lives of autistic or neurodivergent individuals. The stranger, according to Simmel, is not an outsider; he is a member of the group in which he has come to inhabit, but is different from those members indigenously belonging to it. As such, he 'is freer practically and theoretically; he surveys conditions with less prejudice; his criteria for them are more general and more objective ideals; he is not tied down in his action by habit, piety, and precedent' (Simmel and Wolff, 1950: 405). In essence, as Jackson-Perry and colleagues (2020) expand, through his possessing of qualities different to those that form the norms of surrounding culture, he is more able to question the norms of said culture. Things which might ordinarily be taken for granted are not. In interactions where interlocutors are formally cast as strangers to one other—as was the case in the Talking Together study—communication takes place in a potentially 'C3' (Young and Sachdev, 2011) context (i.e. a third culture, co-established as

interactions progress). In such contexts, fewer assumptions about mutual manifestness are made, as in most ELF (and some intercultural) communication. With fewer assumptions of mutual manifestness, there are fewer chances for error.

Finally, but not unimportantly, the very presence of the high rapport and mutual interest demonstrated in these conversations contributes to the literature that challenges the reduced social motivation hypothesis of autism (Chevallier et al., 2012; Clements et al., 2018). According to this hypothesis, autism ‘can be construed as an extreme case of diminished social motivation’ (Chevallier et al. 2012: 231), an assumption that has been ‘flatly contradicted by the testimony of many autistic people themselves’ (Jaswal and Akhtar, 2019: 1). The qualitative content of the conversations—the expression of a deep loneliness and a yearning for social connection—directly counters an assertion central to the social motivation hypothesis, namely that autistic people do not experience loneliness as a result of reduced social connections (Chevallier et al., 2012). The conversational tasks in this study were designed to be meaningful for those involved and it is therefore possible that autistic participants engaged with their interlocutors because this was a topic they were interested in. However even if this is the case it does not undermine the fact the social connections were sought out and made, and only serves to highlight the potential for rich social engagement if a common interest can be established.

There is one important caveat to be made in relation to the present discussion of the present study. Findings such as these, which indicate that autistic people may enjoy more synchronous communication with fellow autists, must not be interpreted as support for the exclusion of autistic people from ‘mainstream’ society. Nor should it be taken to suggest that autistic individuals should necessarily get on well with other autists as we are as much all individuals as anyone. Yet in a world where those with cognitive impairments or learning difficulties are being given Do Not Resuscitate orders during the Covid-19 pandemic (Inclusion London, 2020), and young autistic people find themselves with their rights removed, incarcerated indefinitely in ‘care’ homes (BBC Radio Four, 2018), the genuine risk of harm that comes from isolating autistic people from wider society bears acknowledgement. Furthermore, it is also important to remember that the findings from this research have not suggested that cross-dispositional attunement is an impossibility: quite the

opposite. If anything, I would hope that these findings encourage a renewed vigour in the supporting of mutually satisfying cross-dispositional interactions.

2. Strengths and limitations

This study is the first relevance theoretic examination of autistic language use from a non-pathologising position. This stance centralises the perspective that autistic ways of being are different, not deficient, and it follows that difficulties in cross-dispositional communication must be explicable by any sound theory of utterance interpretation. This thesis has demonstrated both that autistic people communicate according to the same principles of relevance as typically-developing speakers, and that relevance theory offers a robust framework for explaining how humans do and do not achieve mutual understanding.

The linguistic analysis benefited, I believe, from being undertaken by an autistic analyst. The analysis begins from the perspective that something is deficient and language features are seen to prove this theory. This kind of misinterpreting of data is rife in autism research (Jaswal and Akhtar, 2019; Nicolaïdis, 2011) and, perhaps ironically, stems from an inability to empathise with the autistic participants under scrutiny. The DEP is a significant and potentially dangerous factor in the mechanics of autism research (e.g. see a recent study in Vietnam that anaesthetised and operated on 30 autistic children between the ages of three and seven, providing them with bone marrow transplants to test whether it might reduce their autistic behaviours, with no control condition: Nguyen Thanh et al., 2020). In qualitative research, the analyst seeks to achieve closeness to the data, ‘by understanding each participant’s words, from his or her own perspective, and hence according to the terms that individual has set’ (Watts, 2013: 4). This, of course, will be easier when the minds of the analyst and of those participating in the study are similar, and harder when they are more diverse (see: Chapter F, Section 2). The involvement of autistic voices and perspectives in all stages of research is a cornerstone of participatory research (Chown et al., 2017; Fletcher-Watson et al., 2019; Nicolaïdis, 2011; Pellicano, 2020), exactly for this reason and I believe that it is essential to be led by an autistic perspective when analysing autistic behaviour.

Perhaps the most resounding strength, however, was the most unexpected one. The primary goal of the Talking Together project was to generate naturalistic conversational data for analysis. Yet in choosing to meaningfully engage the participants by making the conversational content purposeful, the dataset became multiply valuable. In total, the Talking Together project generated not only 245 minutes of recorded and transcribed naturalistic conversation data for the primary linguistic analysis but also rich, qualitative content relating to experiences of loneliness in Brighton and Hove, available for a secondary thematic analysis (and reported on in Quadt et al., forthcoming, and Williams, 2020c). Community engagement around an important issue was realised and meaningful interactions between strangers were facilitated, as evidenced by the extremely positive immediate feedback from participants. In addition, the project established a new working relationship between the university and a community partner (Assert), and scope remains for that to be developed. Recall Stauffer's notion of ethical loneliness: it is the promise of engagement with others, and the promise that previously ignored voices will now be heard, that is most important for rebuilding trust in a world where all people do matter. For a few days, Talking Together saw people—strangers—come together and share in their experiences of loneliness. People dared to speak, and dared to listen. In so doing, I believe, an act of world-building took place.

One important limitation of this study relates to the sampling of participants, of whom all were white European. This occurred organically through the self-selection of the participants, although it is likely that it also reflects both the demographic of the city within which the research took place, and the diagnostic biases against autistic people of colour and minority ethnicities (Begeer et al., 2009; Cascio, Weiss and Racine, 2020; Fein and Rios, 2018). This matters, and not only because of the urgent imperative to shift the focus of autism research away from the Global North and white-centric stereotypes. These conversations featured a high degree of rapport, conversational flow, and mutual understanding, but all within a white, broadly mono-cultural context. As a consequence, it is hard to gauge the predicative power of these findings in settings involving larger cultural divergences.

In Chapter F, ELF talk was introduced as a potentially useful working model of cross-dispositional communication, where ELF users let linguistic infelicities pass and make extra efforts (in the form of accommodation and an attitude of receptivity) to ensure mutual

understanding across sometimes large cultural divides. I argued that these so-called ‘C3’ speakers (Young and Sachdev, 2011) must recognise each other as fellow C3 speakers in order to engage in enhanced comprehension procedures. In relevance theoretic terms, this would mean it being mutually manifest that mutual understanding may be more effortful. However in these circumstances speakers not only have very clear intrinsic motivation to ensure mutual understanding (for important business negotiations are often contingent on its success), but these encounters often occur within a context of privilege.

Cascio, Weiss and Racine (2020) have noted the ‘double minority status’ some autistic people of colour may experience on account of both disability and race or ethnicity. Yet, they remain poorly represented in autism research. As such, we have very little information available about how these factors may intersect: in terms, for example, of masking behaviours (see Hull et. al., 2017). Code-switching by people of colour, for example, from Black British English, Multicultural London English or African American English to either Standard British or Standard American English is common when moving into white spaces (Grehoua, 2020; Wyatt and Seymour, 1988; Young 2009). This phenomenon reflects Du Bois’ (2008) ‘double consciousness’, whereby black individuals are in a state of constantly monitoring how they might be perceived through the eyes of the hegemonic white society around them and adapting their behavior accordingly in order to be accepted or, at times, survive. This splitting of the self into subjective and objective parts is a common experience for those existing at the (metaphorical) borderlands between two cultures, as Anzaldúa (1987) has also described (see Chapter F, Section 4). There is a striking similarity between this and the masking behaviours associated with autism. This extra layer of complexity may either improve or minimise chances of interlocutors entering into a C3 communicative mode. Further studies investigating intersubjectivity or the DEP may wish to address this, and actively include autistic people of colour within the cohort.

3. Contributions of this thesis

Stakeholders in an independent James Lind Alliance Priority Setting Partnership priority-setting report (Cusack and Sterry, 2016) identified issues around autistic communication as a top priority for autism research. But despite this, an earlier large-scale review of autism

research in the UK (Pellicano, Dinsmore and Charman, 2014: 756), involving qualitative engagement with autistic people, their family members and autism practitioners about their own research priorities, found that ‘there was a clear disparity between the United Kingdom’s pattern of funding for autism research and the priorities articulated by the majority of participants’. While language and communication in autism is clearly a key area for research, it is one that is ‘now relatively little studied’ (Happé and Frith, 2020: 12). This thesis aimed to address that gap: the ‘blind spot’ (De Jaegher, 2013:14; Morrison et al., 2019b) in autism research of autistic social interaction. In so doing, it has generated numerous novel contributions to both the domains of relevance theory and autism research, outlined below.

3.1. Contributions to the relevance theoretic literature

In a forthcoming paper exploring how pragmatic research into the meaning of non-verbal behaviours and clinical research into the communicative strategies of people with aphasia may inform each other, Jagoe and Wharton (forthcoming: np) argue the following:

The potential for pragmatic insights to be enriched, and even generated, from investigation of people with communication disabilities has been vastly underutilised in theoretical pragmatics. An adequate pragmatic theory must account for the full range of human communication, including that of people with communication disabilities.

Yet to date, of the few studies and treatises that have applied a relevance theoretic lens to autistic communication (Happé, 1991, 1993, 1995; Leinonen and Kerbel, 1999; Leinonen and Ryder, 2008; Loukusa et al., 2007; Papp, 2006; Wearing, 2010), all have approached the matter from the perspective that autistic people have significantly impaired ToM abilities (see Leinonen and Ryder (2008) for detailed review). From this perspective, autistic people are either considered unable to function as ‘normal’ people do, on account of their inability to ‘recognize the speaker’s thought behind the utterance’ (Happé, 1993: 106), or thought of

as working with ‘impoverished inputs’ (Sperber, 2004 in an online discussion, in Wharton 2014: 479).

Autistic participants have generally been used as case studies to validate relevance theory’s claims on the mechanisms of utterance interpretation. Wearing (2010), for example, has argued that the pragmatic impairment associated with autism, specifically around the interpretation of metaphor, is explicable on account of autistic people not being able to know what the speaker knows (and therefore not able to correctly exclude wrong interpretations of an ambiguous utterance). Not only this, but the presence of such impairments, according to Wearing (2010), also demonstrates relevance theory’s descriptive ability: for individuals with (assumed) diminished ToM are unable to perform those cognitive linguistic tasks (such as understanding metaphor) that are contingent on the abilities that are lacking. This, as with Happé’s (1991, 1993, 1995) similar arguments is somewhat circular and less than persuasive now that the ToM-deficit theory of autism has since been undermined (see Chapters X and F). Instead, this thesis offers an alternative vision whereby relevance theory can still explain the pragmatic breakdowns seen between autistic and non-autistic people, but here framed in the context of mutual cognitive environments, mutual manifestness and mismatched salience. As such, this thesis and its contents shift responsibility for mutual understanding back into the shared space between two interlocutors rather than on the shoulders of one ‘impaired’ individual.

Additionally, this thesis has taken a broadly interdisciplinary approach to relevance theory, bridging its ostensive-inferential account of utterance interpretation with theories of intersubjectivity from the social sciences. Relevance theoretic work still tends to occur ‘at a fairly abstract level’ (Sperber and Wilson, 1997: 145), and has been criticised for its apparent negligence of the social aspects of life and communication (Sperber and Wilson, 1997; Mey and Talbot, 1988), and absence of application to genuine, naturalistic language (Mey and Talbot, 1988).

This thesis applies the framework of relevance theory to an analysis of naturalistic language and in so doing makes relevance theory relevant. Moreover, it blends the core principles of relevance theory with cutting edge neuroscientific theories of embodied, embedded, enactive cognition (see Chapter Z), ensuring that relevance theory remains up to date and offering a means of unifying it with social science theories of intersubjectivity. As such, relevance

theory may prove a useful tool for connecting multiple siloed disciplines (social science, linguistics and cognitive neuroscience) that are essentially studying the same phenomenon (human communication and interaction).

3.2. Contributions to the autism literature

One of the primary contributions of this work is that it expands the current evidence base for the DEP. Beginning as a theory (Milton, 2012b), the DEP has been developed in recent years, with studies emerging that have tested its validity and established its impact on cross-dispositional interaction (see: Milton, Heasman and Sheppard, 2018 and Chapter X for an overview). These studies (such as Brewer et al., 2016; Crompton, Fletcher-Watson and Ropar, 2019a, 2019b; Edey et al., 2016; Heasman and Gillespie, 2017, 2019; Hubbard et al., 2017; Morrison et al., 2019b; Sheppard et al., 2015) have been significant in the support they have lent to the theory, but as Milton, Heasman and Sheppard (2018: 5) have highlighted, a greater body of empirical work is still required, ‘to improve understanding about the processes through which it occurs, its scale and impact across different contexts of social life, and possible interventions that can ameliorate its negative social effects for both autistic and non-autistic individuals’.

This thesis, uniquely, aims to provide some suggestion for what may be happening cognitively during episodes of mutual misunderstanding between autistic and non-autistic individuals, from the perspective of the DEP. In this way, it moves empirical work on the DEP into a new context: away from the social sciences and studies focused on intersubjectivity and perspective-taking into the technical nuts and bolts of communication. This is a small-scale study and one which bears replication, but the finding that autistic individuals saw improved rapport, flow and mutual understanding when conversing with other autists, even when strangers, has potentially significant implications.

For example, while concluding their discussion on the findings from their diffusion-chain communication study, Crompton and colleagues (2019b: 16) observed that ‘confirmation of the finding that autistic social difficulties operate solely across the autistic-neurotypical divide could have profound implications for the classification of autism as a disorder in the

Diagnostic and Statistical Manual (APA, 2013)'. The findings from this thesis appear to add support to Crompton and colleagues' observations (2019b), and to a small but growing body of work evidencing the DEP and the fact that autism may not be a disorder (though it certainly includes characteristics that are disabling in a society not designed to accommodate them) but a 'way' (Chapman, 2019a; Fein, 2018).

Additionally, this thesis contributes to the literature describing a monotropic account of autism, explained by relevance theory, through the findings that indicate that when processing effort is minimised in conversation, individual communicative infelicities may also be reduced, as discussed above. This may explain, for example, why in a study involving an information transfer task (Crompton et al., 2019b), autistic people both transmitted the necessary information more efficiently and experienced higher rapport when interacting with other autistic people. These findings have potential implications for how the communicative competence of autistic people is assessed, particularly if assessing interlocutors are non-autistic. Moreover, the potential for hyper-confluence when two monotropic minds synchronise flow states poses interesting questions, particularly in terms of engaging more minimally verbal autistic people in meaningful ways.

Finally, this thesis extends research surrounding loneliness in autism. As was discussed above, the very fact of the high rapport and interpersonal engagement demonstrated in these conversations challenges the social motivation hypothesis of autism (Chevallier et al., 2012) and one of the somewhat offensive premises on which is based: that autistic people do not desire human connection (*ibid.*). At the present time, there is no evidence base to explain the underlying mechanisms for increased mental health issues in autism compared to a general population (Siminoff, 2020). As a result, the UK National Institute for Clinical Excellence (NICE) guidelines for the treatment of mental health issues in autism are no different to those for the general population (NICE, 2012; Siminoff, 2020).

This thesis has identified how ethical loneliness may contribute to a pervasive sense of isolation from wider society, and a sense of anomie. Loneliness, as was discussed in Chapter R, Section 1, can 'initiate a cascade of complex body-brain interactions that make the whole organism more vulnerable to mental and physical health conditions' (Quadt et al., 2020: 296). In fact, a significant theme emerging from the qualitative content of the conversations was the way in which loneliness and depression inter-related for several of the participants.

The findings from this study point to the fact that not only do autistic people experience sometimes profound degrees of loneliness but that some of this loneliness is attributable to the lack of meaningful connections with others: something that is often due to the DEP.

4. Conclusion

Interestingly, flow has been proposed by some to be the opposite of anomie and alienation (Csikszentmihalyi, 1990; Milton, 2017b). Intuitively, it is hard to imagine feeling disconnected from society or oneself during these moments of optimal experience and presence in the moment. The findings of this thesis potentially offer an answer to the question posed by Milton (2017b: 1674): whether ‘flow-like states of dynamic quality [could] be said to ward against alienation and anomie, increase a sense of well-being and reduce negative experiences of stress’.

While the arguments here have focused primarily on a cognitive linguistic view of human communication, what seems to be most important is not how we make ourselves understood, but how can we connect. When minds are organised in similar ways and attention shaped by similar patterns of salience, mutual understanding, synchrony, shared flow and rapport are easier to achieve. Where minds differ, these things do not come easily and both parties must make extra efforts to establish what exactly it is that is mutually manifest, and potentially build a new, third space with new shared concepts, and new associations.

As a species today, we are more socially connected than ever. As human society becomes increasingly complex, more and more communication occurs cross-dispositionally: be that interculturally, between social groups, or communities of practice. The skills required to communicate cross-dispositionally are transferrable and beneficial to all; they benefit our human relations with fellow humans, and our relations to all those non-human beings with whom we share a precarious planet. I have begun to explore what these skills might look like, but further research should prioritise identifying them most clearly, and devising and trialling interventions whereby these skills are taught or facilitated.

While bees gather their sustenance from flowering plants, the plants also benefit from the carriage of their pollen to further, fertile plants. This mutualism benefits both species by enabling each to thrive. Most importantly, nothing is lost. These third, new spaces between diverse minds are where innovation is borne. Communicating cross-dispositionally is both an act of translation and an act of creation. Not only may such interactions reduce the harm caused by the rupture of ethical loneliness, but they may bring new understandings about the world and about ourselves.

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Appendices

Appendix 1: Screen shot of Group A invitation webpage

Appendix 2: Screen shot of Group B invitation webpage

Appendix 3: Group A participant information sheet

Appendix 4: Group B participant information sheet

Appendix 5: Group A consent form

Appendix 6: Group B consent form

Appendix 7: Group B post-conversation second consent form

Appendix 8: Group X consent form

Appendix 9: Prompt questions

Appendix 10: Transcription conventions

Appendix 11: Sense-making meeting agenda

Appendix 12: Coding schemes

Appendix 1: Group A invitation webpage

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WOULD YOU LIKE TO BE INVOLVED...?

We are looking for participants for this PhD research project investigating **autistic communication**.

What is the Talking-Together project?

The Talking-Together Project looks at autistic communication in a new way. We are also interested in finding out about **experiences of loneliness in Brighton**. We would like to know your opinions on how loneliness in Brighton could be addressed. These ideas may be used to create a community project to tackle loneliness in the future.

What would I need to do?

Take part in **three short conversations** (around 10 mins each) which will be recorded.

Where and when?

At the **Assert premises** at Community Base, Brighton.

Sometime in **Feb-March 2019** when it is convenient for you.

Who is doing the research?

My name is Gemma. I am an autistic PhD student of Linguistics at the University of Brighton.

Interested? *(Great!)*

For more detailed information email Gemma at:

G.Williams6@uni.brighton.ac.uk

Tell me:

- your name
- do you have an autism / Aspergers diagnosis
- have you been involved in research in the last three months?

We **will respond to everyone** who shows an interest in taking part. However, as this is a small study we will only need a few participants at this stage so we cannot guarantee that everyone who contacts us will be selected.



Appendix 2: Group B invitation webpage

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WOULD YOU LIKE TO BE INVOLVED...?

Do you have opinions about how to tackle loneliness in Brighton?

We are looking for participants for this PhD research project investigating community communication in Brighton.

What is the Talking-Together project?

The Talking-Together Project is part of a **University of Brighton Linguistics PhD Research project**, investigating communication across pairs of strangers. We are also interested in finding out about **experiences of loneliness in Brighton**.

We would like to know your opinions on how loneliness in Brighton could be addressed. **These ideas may be used to create a community project to tackle loneliness in the future.**

What would I need to do?

Take part one or two **short conversations** (around 10 mins each) which will be recorded.

Where and when?

At **Community Base**, 113 Queens Rd, Brighton BN1 3XG

Sometime in **Feb-March 2019** when it is convenient for you.

Reasonable travel expenses to Community Base will be reimbursed.

We will respond to everyone who shows an interest in taking part. However, as this is a small study we will only need a few participants at this stage so we cannot guarantee that everyone who contacts us will be selected.

Interested? *(Great!)*

For more detailed information email Gemma at:

G.Williams6@uni.brighton.ac.uk

Tell me:


- your name
- have you been involved in research in the last three months?

Appendix 3: Group A participant information sheet



University of Brighton

Research Project: Talking-Together about loneliness*

<p>Hello!</p>	<ul style="list-style-type: none">• My name is Gemma and I am the researcher running the Talking-Together project.  <ul style="list-style-type: none">• I'm a PhD student at the University of Brighton.• I'm also autistic.
<p>What is the Talking-Together project?</p>	<ol style="list-style-type: none">1. My PhD is looking at autistic communication. I am interested in our unique ways of communicating. (I think these unique ways are great).2. I am also interested in finding out about experiences of loneliness in Brighton. I would like to know your opinions on how loneliness in Brighton could be addressed.

	<p>These ideas may be used to create a community project to tackle loneliness in the future. Please think about whether feel comfortable talking about this topic.</p>
<p>Invitation</p> <p>When?</p> <p>Where?</p>	<ol style="list-style-type: none"> 1. You are invited to take part in this study because you are autistic / have Aspergers. 2. I am interested in your opinions about loneliness in Brighton and how to address the problem. <ul style="list-style-type: none"> • One day in February or March 2019 that is convenient to you. Then one other day in November 2019 to tell you about the results. • This will happen in a room at Assert, Community Base, 113 Queens Rd, Brighton BN1 3XG.
<p>What will happen if I take part in Talking- Together?</p>	<ol style="list-style-type: none"> 1. You will take part in three short conversations (about 10 mins each) about loneliness. These conversations will be recorded.

Conversation Number 1)

You must chose somebody you know well that you enjoy talking with (**family member/ friend**, etc). You will bring them to Assert. We will look at this information sheet together. I will give you two or three questions about loneliness in Brighton to discuss for about 10 minutes.

Conversation Number 2)

You will be introduced to **another Assert member**. I will give you two or three questions about loneliness in Brighton to discuss for about 10 minutes.



Conversation Number 3)

You will be introduced to a student from the University of Brighton. They will be aged 18-24. I will give you two or three questions about loneliness in Brighton to discuss for about 10 minutes.

(These conversations can be on different days if that is easier for you.)

2. I will invite you to come all together in November 2019 for **a group workshop** at a room Assert.

	<ul style="list-style-type: none"> • We can share our experiences of the Talking-Together conversations. • I can tell you some early results from my PhD research. • You can help me decide how to share the results with the public if you want to.
<p style="text-align: center;">Will my information be kept confidential and safe?</p> <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> • Yes. Your conversations will be recorded and then transcribed. I will fully anonymise these transcripts and store them securely until the end of my PhD. • I may use extracts from your conversations in my PhD thesis, research publications, conference presentations or an art exhibition but your names and any identifying information will be removed. • AFTER your conversation, your third conversation partner will be told that “<i>some</i>” of the participants in this study are autistic but I will not reveal any individual’s diagnosis. • There is a small chance that your conversation partner may read a research paper in the future and recognise extracts of your conversation, and then they may realise that you are autistic. If you are not happy with this you should not take part and that is okay.

	<ul style="list-style-type: none"> • I might like to reanalyse the conversations after my PhD to help inform a community loneliness project initiative. You can chose to let me keep the anonymised transcripts for 5 more years after my on my password protected computer if you are happy with this.
<p>Travelling is expensive</p>	<ul style="list-style-type: none"> • I will reimburse you any reasonable travel expenses (not a helicopter!) to and from Community Base and your home to take part in the Talking-Together project. (You will need to give me your tickets or receipts.)
 <p>Do I have to take part?</p> <p>Can I change my mind?</p>	<ul style="list-style-type: none"> • You do not have to take part in the Talking-Together project. • You can change your mind and tell me to delete my recordings and data at any time up to two weeks after the conversations. (After two weeks the data will be anonymised.) • This research is not connected to services at Assert. Your decision to take part or to withdraw will not affect your relationship with Assert in any way. 

**Ok! I'd like to
take part.
What next?**

Excellent!

- You will need to **chose a family member or a friend** to join you for Conversation Number 1.
- Please **show them this information leaflet** and ask them to read it. Check they are happy to take part.
- **Please email me** (Gemma) at G.Williams6@uni.brighton.ac.uk to tell me that you and want to take part and who your chosen conversation partner will be.

**YOU CAN ALSO EMAIL ME WITH ANY
QUESTIONS BEFORE YOU DECIDE TO
TAKE PART.**



*The Talking-Together project has passed an ethical review by the University of Brighton Arts and Humanities Tier II Ethics Board. (Yay!)

Appendix 4: Group B participant information sheet



University of Brighton

Research Project: Talking-Together about loneliness

What is the Talking-Together project?

Thank you for your interest in the Talking-Together project. This project forms part of a **Linguistics PhD research**

According to the Jo Cox Loneliness Commission in (www.jocoxloneliness.org), over 9 million adults are often or always lonely, and the recent BBC Loneliness Experiment (2018) found that **the highest levels of loneliness were reported in younger respondents** (16-24 age group).

Talking-Together aims to **bring young people from the university together with members of the public to meet and talk together about loneliness in Brighton**, and to see if any ideas can be generated as to how this issue could be addressed in our community. These ideas *may* be used to inform a future community project aimed at tackling loneliness in Brighton.

Talking-Together will be facilitated by Gemma Williams, the PhD researcher. It is funded by the University of

What's involved?

You will be required to **take part in one** (or possibly two) **short conversations** with a member of the public, about loneliness in Brighton. These conversations will be recorded and will last around 10 minutes. You can go into as much or as little personal detail as you like about your experiences of loneliness, but please make sure you feel comfortable discussing this potentially emotive subject.

Prior to the conversation taking place you will have an opportunity to read through this information sheet again

You and your conversation partner will be given two or three prompt questions to help guide your conversation.

The conversations will take place at **Community Base, 113 Queens Rd, Brighton BN1 3XG**, one day in **February**

You will have the opportunity to chose to be contacted in the future (or not) about being involved in any

Why have I been invited to participate?

This is a study about communication, and how people establish and maintain common ground in conversations. It is part of a Linguistics PhD research project, analysing communication across pairs of strangers. **We are looking for young people in the Brighton and Hove area, aged 18-24, who do not have a history of speech and language difficulties, autism spectrum conditions or learning difficulties.**

We are keen to hear the voices of young people in the Brighton area regarding their experiences of loneliness in Brighton. We are also keen to create an opportunity for dialogue between students at the

Do I have to take part?

Participation in this study is **completely voluntary**. You are absolutely free to decide to withdraw and can ask to have the audio recording of the conversation deleted at any point **for up to two weeks after the data collection**, at which point data will be anonymized and transcribed.

Will I be paid for taking part?

We will reimburse reasonable travel expenses to Community Base, Brighton, where the conversations will take place. Please hold onto tickets/receipts. You can email copies of these to Gemma at G.Williams6@uni.brighton.ac.uk after you have taken part.

Confidentiality and management of your data:

Your identity will be kept confidential. Your conversation will be recorded using a digital recorder. Any identifying information, including your name, will be digitally edited out prior to transcription. Transcribed conversations will be fully anonymised and pseudonyms (Participant A, B, etc...) will be used. Transcriptions will be stored securely on university storage until the end of the PhD project. *If you give your additional consent to the content of the conversations being possibly reanalysed to inform a community loneliness project, these anonymised transcriptions will be stored on a single password-protected computer for a maximum of five subsequent years.*

What will happen to the results of the project?

Anonymised extracts may be published within Gemma Williams' PhD thesis, research papers, conference presentations or art installation.

What next? / I have questions:

If you would like to take part please email Gemma at G.Williams6@uni.brighton.ac.uk to confirm.

Please feel free to ask any questions you may have or for further clarification.

Appendix 5: Group A consent form



University of Brighton

Core Participant Consent Form : Talking-Together about Loneliness

Please tick if you agree



I have read and understood the information sheet for the Talking-Together study.

I understand that I will take part in three short conversations and that these will be recorded.

I understand that extracts from these conversations will be anonymized and then published in a PhD thesis and also maybe research papers, conference presentations or art installation.

I understand that there is a small chance that my conversation partner from Conversation Number 3 (and only this person) may be able to work out that I have an autism diagnosis if they read a research paper and recognise our conversation.

I understand that my participation is voluntary and that I can withdraw from the study at any time.

I agree to take part in the above study.

I have a diagnosis of autism / Asperger's

***I also** give permission for Gemma to keep my transcript for up to five additional years, and the content of the conversations about loneliness to be re-analysed to inform a possible community loneliness project.



.....
Name of Participant, Date, Signature

.....
Name of Researcher, Date, Signature



Appendix 6: Group B consent form

University of Brighton

Participant Consent Form : Talking-Together about loneliness

Please tick if you agree



I have read and understood the information sheet for the Talking-Together study.

I understand that I will take part in one (or two) short conversation(s) and that this/these will be recorded.

I understand that extracts from this conversation will be anonymised and then published in a PhD thesis and also maybe research papers, conference presentations or art installation.

I understand that my participation is voluntary and that I can withdraw from the study at any time up to two weeks following data collection.

I agree to take part in the above study.

I don't have a history of speech and language difficulties, autism spectrum conditions or learning difficulties.

*I also give permission for the content of the conversations about loneliness to be re-analysed to inform a possible community loneliness project, and for my data to be kept for an additional maximum five years.

.....
Name of Participant, Date, Signature

.....
Name of Researcher, Date, Signature

Appendix 7: Group B post-conversation second consent form



University of Brighton

Research Project: Talking-Together about
loneliness

Thank you for taking part in this study!

Now that it is complete we can inform you that the key aim of this study is to investigate how different types of people establish and maintain common ground in conversations. As such, **some of the conversation partners in this study are autistic**. We could not include this information in your initial participant information sheet as it was important for the study for us to avoid any potential biases or modifications of your natural speech that this information may have created.

Everything else you have been told about this study remains the same.

Please sign below to confirm that you are still happy for your conversation to be included in this study, given the above disclosure.

Name: _____ **Date:** _____

Appendix 8: Group X consent form



University of Brighton

Participant Consent Form : Talking-Together about loneliness

Please tick if you agree



I **have read and understood the information sheet** for the Talking-Together study.

I understand that I **will take part in one (or two) short conversation(s)** and that this/these **will be recorded**.

I understand that extracts from this conversation **will be anonymised** and then **published** in a PhD thesis and also maybe research papers, conference presentations or art installation.

I understand that **my participation is voluntary** and that I can withdraw from the study at any time up to two weeks following data collection.

I agree to take part in the above study.

*I also give permission for the content of the conversations about loneliness to be re-analysed to inform a possible community loneliness project, and for my data to be kept for an additional maximum five years.

.....
Name of Participant, Date, Signature

.....
Name of Researcher, Date, Signature

Appendix 9: Prompt questions

We're interested in your experiences of loneliness and any ideas you may have about how to address loneliness in the Brighton & Hove area. Some questions to help you:

What does loneliness mean to you?

What is your experience of loneliness in the Brighton and Hove area?

We're interested in your experiences of loneliness and any ideas you may have about how to address loneliness in the Brighton & Hove area. Some questions to help you:

Do the results of Loneliness Experiment (provided) surprise you?

What do you think could be done in the city to address loneliness?

We're interested in your experiences of loneliness and any ideas you may have about how to address loneliness in the Brighton & Hove area. Some questions to help you:

Do you think loneliness is a problem in Brighton and Hove?

What could be done to encourage strangers to talk together more?

Appendix 10: Transcription conventions

.	Period indicates a falling, or final, intonation contour, not necessarily the end of a sentence.
?	Question mark indicates rising intonation, not necessarily a question.
,	Comma indicates “continuing” intonation, not necessarily a clause boundary.
↑↓	Upward and downward pointing arrows indicate marked rising and falling shifts in intonation
:::	Colons indicate stretching of the preceding sound, proportional to the number of colons
-	A hyphen after a word or a part of a word indicates a cut-off or self-interruption with level pitch
<u>word</u>	Underlining indicates stress or emphasis.
WOrd	Upper case indicates loudness.
°word°	Degree signs enclose whispered speech
=	Equal sign indicate no break or delay between the words thereby connected.
<word>	Indicates slowed down delivery relative to surrounding talk
>word<	Indicates speeded up delivery relative to surrounding talk
(())	Double parentheses enclose descriptions of conduct.
(word)	When all or part of an utterance is in parentheses, this indicates uncertainty on the transcriber’s part.
()	Empty parentheses indicate that something is being said, but no hearing can be achieved.
(1.2)	Numbers in parentheses indicate silence in tenths of a second.
(.) measurable.	A dot in parentheses indicated a “micropause,” hearable but not readily measurable.
[Separate left square brackets, one above the other on two successive lines with utterances by different speakers, indicates a point of overlap onset.
]	Separate right square brackets, one above the other on two successive lines with utterances by different speakers, indicates a point of overlap ending.
...	Ellipsis
(-)	Indicates unintelligible speech, each dash pertains to a syllable.

Appendix 11: Sense-making meeting agenda

Stage Two: Sense-making workshop

Agenda:

Greeting / give agenda

Group discussion point: What were your experiences of taking part?

Group discussion point: Has anything changed since taking part?

Researcher provides short (5 min) lay intro to detailed purpose of the linguistic research

Researcher shares initial findings

Group discussion point: Are these results interesting / useful?

Group discussion point: What ways could these results be shared with wider autistic population?

Appendix 12: Coding schemes

Motifs

flow



presence of flow

- fast-pace enthusiasm (+ short turns)
 - special interest enthusing (e.g. dogs)

stilted / lacking flow

- gaps, lapses
- overlapping turns: cross-talk: [see **tuning in**]
- long turns / monologues:
 - speaker dominating / holding the floor
 - listener allowing speaker ‘to go on...’ (giving space where speaker’s speech is laboured)¹
- interruptions
- non / minimally / only tangentially relevant responses

tuning-in

- checking Qs
 - have I understood you? 
 - have I been clear/ do you understand me?  *absence of mutuality / effortful*

¹ Several As appear to have laboured speech at times.

- invitation to build ‘we-ness’ (*‘You know?’*) —————▶ *presence of mutuality / building*
- overlapping turns
 - finish each other’s sentences —————▶ *attuned*
 - cross-talk —————▶ *not attuned* [see **flow**]
- rapport / affect
- mirroring / echoing
 - specific words / phrases
 - ideas / parallel situations / anecdotes
- accommodation /converging
- extra ‘efforts’
- jokes/humour:
 - deflective of emotional content —————▶ *moving away*
 - creating we-ness / affect / bonding / sharing —————▶ *moving together*

running along the edges of meaning

- left-field topic development
- abrupt topic changes / ‘low demand for coherence’
- non-words / onomatopoeia etc.

mutual manifestness

- moments where it was expected but is not there
- moments where it is there- things don’t need to be said