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Curious Incidents in the Night-Time: Portraying a Mind on the Spectrum in James Joyce's "Ithaca"

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Abstract: This article develops an original reading of Joyce's "Ithaca" episode in "Ulysses" as evidence of "Aspergan" writing and explores more recent portrayals of autistic writing, both by "neurotypical" writers like Mark Haddon in "The Curious Incident of the Dog in the Night-Time" and the autistic savant Daniel Tammet. Both Joyce and Tammet use mapping as means to understand human emotions in their texts. As critics have noted, at the precise point we want to observe the meeting of Stephen and Bloom, the style of "Ithaca"—which is obsessed with mapping its characters' exact movements in night-time Dublin, and crowded with lists, catalogues, and arcane scientific data—prevents us from seeing anything of their humanity. Similarly, in one of his essays, Tammet tries to map out the movements of his mother in order to understand her mind and emotions, which are unavailable to him as a person with autism. While Joyce himself was not likely on the spectrum (as a recent critic has suggested), this reading connects recent theories of mindblindness and reading "Ithaca" as performance that re-creates a mind on the spectrum. This article concludes with a few thoughts on fears of "distant reading" in the digital humanities, which in the fashion of "Ithaca" also prefers maps, lists, and graphs toward a more traditional humanistic inquiry into literary texts.

Keywords: James Joyce, Ulysses, Autism, Asperger's, Mark Haddon, Daniel Tammet

Introduction

Based on what we know of James Joyce's biography today, could the author be placed on the autism spectrum? Did Joyce experience a form of Asperger's syndrome that actually made it possible for him to create the widely recognized modernist masterwork of *Ulysses* (1993)? At least two book-length studies have put forth this very argument.[2] To take one example, Antoinette Walker and Michael Fitzgerald (2006) examine the cognitive style of Joyce, including his demonstrated gift for languages, memory, tenacity, and requirement for sameness in his life, friendships, and work routines, even his speaking style and nearsightedness, to make their case for placing Joyce on the spectrum.[3] In this argument, which does not consider any specific chapter or episode for evidence, the entire novel is enough to demonstrate Joyce's Aspergian sensibility.[4] As they observe: "In effect, *Ulysses* is an autistic narrative, with a rapid-fire delivery or fragmented discourse, and obsessed with the minutiae of life, without focusing on the big picture" (Walker and Fitzgerald 2006, 261). This article will not rely on the premise that the real Joyce should be diagnosed with Asperger's—as other psychological diagnoses are certainly possible. I will instead offer an original reading of "Ithaca," the seventeenth and penultimate chapter of *Ulysses*, which presents the reader with a series of question and answers, while overwhelming the reader with a host of scientific and technical information. I will read this

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[2] Julie Brown's study, *Writers on the Spectrum: How Autism and Asperger syndrome Have Influenced Literary Writing* (2009), also places Joyce on the spectrum along with canonical figures as Thoreau, Melville, Dickinson, Sherwood Anderson, Lewis Carroll, and W. B. Yeats.

[3] For a brief refutation of Fitzgerald and Williams' diagnosis of Asperger's in Joyce, see Paul Whelan's (2009) short response to the book in the *British Journal of Psychiatry*. He nicely sums up Joyce's deftness with handling emotions as he suggests: "It is Joyce's description of complex feeling states that is one of the supreme facets of *Ulysses*" (555).

[4] I will use the term "Aspergian writing" to denote language that is informed by a sensibility that is on the spectrum, regardless if the writer is diagnosed with autism or Asperger's or even who is "neurotypical"—such as Mark Haddon—and who writes in the style of a character with an Aspergian sensibility. For the purposes of this article, I will not attempt to distinguish the gradient between autism and Asperger's syndrome as diagnostic categories in the speculative, historical diagnoses imposed upon Joyce by two recent books that look at his biography. Neither study looks at "Ithaca" specifically and in my reading offered here, this is the chapter that incorporates Aspergian writing most directly.

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chapter as an example of "Aspergian writing" and situate Joyce's text against more recent examples of autistic writing by Daniel Tammet, an "autistic savant," and "neurotypical" writer Mark Haddon, who has impersonated an autistic sensibility for his readers in the popular novel *The Curious Incident of the Dog in the Night-Time* (2003). In exploring the "mindblindness" of the narrator in "Ithaca," I will argue that Joyce in effect anticipates our recent cultural interest—indeed fascination with—minds that are on the spectrum and demonstrate cognitive brilliance through unheard of capacities for memory, heightened visualization, and the like that are unavailable to most neurotypical readers and critics. Thus, Joyce's chapter anticipates the project of reclaiming Aspergian writing as a distinctly valuable addition to the human experience. This reading offers a new way to understand the scientific and technological discourse that comprises much of the complex rhetorical surface in the "Ithaca" episode.

The Theory of Mind for Reading Fiction vs. Mindblindness in Autism

In her study *Why We Read Fiction: Theory of Mind and the Novel* (2006), Lisa Zunshine explores recent cognitive science and philosophical enquiries into the Theory of Mind (ToM) to assert that neurotypical readers of novels enjoy contemplating the minds of others through the experience of reading certain kinds of novels. She observes that "epistolary novels, [...] detective novels, stream-of-consciousness novels like *Mrs. Dalloway* [...] and novels featuring unreliable narrators [...] all engage clusters of cognitive adaptations associated with our [Theory of Mind] and metarepresentational ability in a particularly focused way" (Zunshine 2006, 159). While she does not discuss *Ulysses* specifically, it is very possible to see much of Joyce's novel in terms of an interest—indeed an obsession with—thoughts, feelings, and minds, for any nominal reader of the text is forced to engage the interior monologue, a kind of overheard thinking, of Stephen Dedalus and Leopold Bloom in many of the novel's opening chapters. The nominal style of narration in the *Ulysses* is free indirect discourse—informed by stream of consciousness writing that reveals the inner workings of its two main characters. This narrative strategy invites us—and indeed requires us—to look into the minds of its characters. In most traditional fiction, as Zunshine points out, it is left to the reader to infer the thoughts, emotions, and motivations of imaginative characters. This argument suggests that the pleasures of reading fiction let us invoke and practice our skills with Theory of Mind to imagine what others are thinking. Zunshine indicates that this is part of the pleasure of reading for many of us.

However, this kind of reading is not available to those minds who are on the spectrum. The research scientist Simon Baron-Cohen (1997) argues that mindblindness—the inability to take an other's point of view or read emotions in others—is a clinical feature of full-blown autism. To have mindblindness is to be "blind to existence of mental things [...] like thoughts, beliefs, knowledge, desire, and intentions, which for most of us self-evidently underlie behavior" (1). Baron-Cohen's original formulation of mindblindness describes autistics in everyday, face-to-face interactions with other human subjects, but we can point out that the act of reading is similarly affected. Zunshine foregrounds more experimental texts (like *Mrs. Dalloway*) that seem to highlight the experience of Theory of Mind. The typical experience of reading fiction normally requires us to understand emotions and motivations of characters. Mindblindness prevents such reading of human emotions and motivations—and precludes such kinds of reading activity. The noted autistic Temple Grandin, for example, notes her difficulty in reading and understanding Shakespeare's *Romeo and Juliet* as a young student. The motivations and emotions of this text were entirely opaque to her.[5]

[5] According to Oliver Sacks (1995), who introduced Temple Grandin to a wider audience before she became a successful writer, autism activist, and public figure on her own, Grandin's difficulties with reading emotions in Shakespeare as a central point in her sense being "an anthropologist on Mars." He writes: "She was bewildered, she said, by Romeo and Juliet ('I never know what they were up to'), and with Hamlet, she got lost with the back and forth of the play. [...] [These problems] seems to arise from her failure to empathize with the characters, to follow the intricate play of motive and intention" (259).

In contrast to much of the rest of the novel, "Ithaca," as the second-to-last chapter of James Joyce's *Ulysses*, is composed very differently than the rest of the text. While it is arguably the most inventive—a series of questions and answers in the form of an interrogation or catechism that engages a great deal of science, it is also the most distant and orthogonal to the reading experience in the rest of the novel where we hear the thoughts and experience the emotions of its characters while continually looking into Stephen and Bloom's minds. Furthermore, the narrative voice of "Ithaca" is very different than the narrator of the rest of the novel. This "narrative intelligence" is actually unanchored to a person or character in the novel unlike many of the other episodes, which are clearly filtered through Stephen, Bloom, and Molly (in "Penelope," its last chapter, which features her night-time thoughts.) In "Ithaca," Joyce confronts the reader with an Aspergian sensibility that frustrates our ability to read the minds of Stephen and Bloom—a keen contrast with the rest of the novel, which absolutely requires us to experience these minds engaging the world around them as these two characters make their way around the city of Dublin on a particular day in June.

The Parade of Styles in *Ulysses* Includes Aspergian Writing

Some forty years ago, Marilyn French (1976) observed that the later chapters in *Ulysses*, with their increasingly difficult styles, obfuscate and subvert our understanding of a sense of the "real" characters of Stephen Dedalus and Leopold Bloom built up in the novel's earlier sections. In these later chapters, "impersonal narrative voices take over completely, and the human subject matter gets lost at precisely the point of greatest tension in the 'action' and in us" (207). There is a disconnect here between our sense of an accurately depicted, naturalistic world of Dublin developed earlier, and the later obfuscating styles. The pairs of questions and answers in this episode "are presented in such abstract, technical, or pedantic language that we get no sense of the humanity of the characters" (221).

"The Little Professor" on Eccles Street

The actual Dublin was meticulously documented by Joyce, as Richard Ellmann (1982) points out, by Joyce's reliance on factual sources—newspapers and frequent letters to Dublin to verify individual details of the city. For Michael Fitzgerald and Antoinette Walker (2006), such obsessive precision in documenting the real Dublin is additional evidence for Asperger's syndrome in Joyce's own mental make-up, one of a handful of Irish geniuses they identify on the spectrum. Their genius, they argue, is a direct product of the Aspergian mind. My point is not to argue for or against Joyce the historical author as on the spectrum or not, but to engage the writing in "Ithaca" as a sensibility that is informed by Asperger's, regardless of whether the real Joyce fit the parameters of this particular diagnostic category.

On its face, "Ithaca" adapts the most non-literary, obviously scientific materials at the precise point where within the narrative codes of a well-made nineteenth-century Victorian novel, readers might well desire resolution. We expect to see what these characters are thinking and feeling. In the scheme of the novel's Homeric parallel, Stephen and Bloom are figurative father and son. In this episode, the two discuss all sorts of topics, the convoluted surface of "Ithaca" hints, but we never hear a word of their actual conversation. Do the two characters begin a friendship? Does Stephen really one day give Italian lessons to Molly, one of the possibilities raised in this episode for these two characters' future interactions? We do hear summaries of their thoughts, but at a considerable distance, without the immediacy of the novel's previous narrative strategy of free indirect discourse employed in the text's earlier chapters. While these earlier sections give us access to the thoughts of Stephen and Bloom in a running commentary of their inner mental worlds, the later chapters withhold and obfuscate. French (1976, 207) observes: "We are avid to know if Stephen and Bloom will really get together, if their meeting will change the life of either." If the reader has expectations in the mold of a traditional Victorian

novel's final meetings between characters long-lost to one another, "Ithaca" is a sure disappointment. French's reading points out that the reader has grown to understand and enjoy the inner workings of Stephen and Bloom's minds earlier in the novel. The reader learns the rhythm of their thoughts, there musings, and even their fears and velleities. However, "Ithaca" abruptly turns off access to the "real" Stephen and Bloom and instead substitutes this previously available knowledge of mind with lists, descriptions of fact, and pseudo-fact. I am arguing here that this voice mimics Aspergian writing.

Actually, beyond its ornate rhetorical surface, the plot of "Ithaca" is remarkably simple. As with Odysseus after his travels, Bloom heads home after a long journey to Eccles Street, with Stephen Dedalus in tow. Before parting, the two make no specific plans to meet in the future, and the narrative voice is evasive on the implication that figurative father and son have found one another. They travel to the older man's home and talk, parting rather indecisively as no more than acquaintances (from different generations, no less). However, the style of "Ithaca" is a continual obstacle.

The reader is confronted with a narrative voice that delights in rehearsing numbers, facts, and figures, and borrows terms from science, civic history, mathematics, biology, and astronomy with all the intensity of a "little professor," which the clinician Hans Karl Asperger first noted in his initial descriptions of Asperger's syndrome in the 1940s (Sacks 1995, 245–48). The omniscient narrative intelligence of "Ithaca" spins out ever more detail. It never seems to acknowledge that we are, in fact, interested in these two characters more than, say, we are in the water systems of Dublin. The question "Did it flow" is a remarkable passage, bound to sow a measure of bewilderment and wonder in the first-time reader of "Ithaca." Bloom merely wants to boil water for a cup of cocoa. Instead, using the word count from the Gutenberg edition of the novel, we are treated to a 200-word disquisition on the workings of the Dublin water system. In the follow-up, which asks about "waterlover" Bloom's relationship toward water, we get a nearly 500-word disquisition on the qualities of water. All he was doing was turning on the faucet.

"Ithaca" is a descriptive compendium of detail, which models an Aspergian obsession with certain subjects over others, and a general mindblindness, to borrow Simon Baron-Cohen's term about the narrator's knowledge about the inner mental lives of each character. The episode creates the impression of completeness, of reproducing the world itself in such detailed facts and figures. But it exposes a paradox in that, while providing ever more detail, it conveys less meaning about what we really want to know: the actual characters of Stephen and Leopold Bloom in the model of humanistic reading of the traditional novel, or even the newer model of reading for Theory of Mind put forth by Zunshine.

Besides the distancing effect of the presentation of the scientific and mathematical material to describe characters, "Ithaca" also freezes narrative time to a standstill. Some of the questions in this episode describe processes, such as Bloom boiling water in his kitchen, but others—such as comparing the ages of Stephen and Bloom with an obsessive, numerical precision—are entirely descriptive. These sections show no "delta-T," or change in narrative time, a term from physics to describe moving objects through space and time. When this "change in time" approaches zero, narrative time stops, and this happens within several sets of queries and responses. French (1976, 221) is probably quite right to observe: "If 'Ithaca' were the first chapter in the book few [readers] would read further—yet it is probably the greatest chapter in the novel." For Walker and Fitzgerald (2006), Joyce's lack of interest in plot is more evidence for placing him on the spectrum. However, any reader of *Ulysses* knows that much of the novel is set relentlessly in the present—as Bloom and Stephen's thoughts are embedded in the stream of their ordinary activities on June 16th, 1904—for Bloom, buying a kidney from the butcher and frying it up in his kitchen and making tea for his spouse Molly ("Calypso"), taking a bath ("The Lotus Easters"), attending the funeral of a friend ("Hades"), canvassing an ad ("Aeolus"), or visiting a brothel in Nighttown and rescuing Stephen ("Circe"). It is only the later, shape-shifting

rhetorical styles where language arguably becomes a major emphasis and the quotidian plot gets lost in the scientific and arguably Aspergian rhetoric.

In its question-and-answer format, the narrative in "Ithaca" does risk stopping time altogether. Each question posits a distinct moment in narrative time and a response, in which the nearly obsessive intelligence presents much, much more than most readers could be interested to know about scientific or technical matters. It is up to the reader to connect the rhetorical dots, so to speak, and continue the narrative of Stephen and Bloom at Eccles Street. The closer one looks at a scientific process, for instance, the underpinnings of Bloom boiling water for cocoa for Stephen in his kitchen, the more there is to say about the science of heating water. In the Aspergian sensibility, human feeling and inner thoughts of characters are marginalized in the interest of external data points, patterns, mapping, and a compendium of encyclopedic detail. In the original formulation of the syndrome that bears his name, the clinician Karl Asperger used the example of the "little professor," children who could recite the details of vacuum catalogs or other apparently "useless" information in great detail, much more than what neurotypical children or adults might be interested in. Many of the long and highly details responses of "Ithaca" give us such "lecture" on scientific and technology topics in extreme detail.

In his revised reader's guide to *Ulysses*, Hugh Kenner discovers a "demotic" source of the question-and-answer format in the *Tit-bits* weekly newspaper, which, he reminds us, is Bloom's favorite journal (Ellmann 1982, 145). Instead of real scientific experts, according to its editors, the source of the paragraph-long answers to short questions was "the office help who had the answers ready" (145). Such a reading puts "Ithaca" on the same page as its predecessor as the discursive and meandering "Eumaeus," which can be read as written by Bloom for the very same *Tit-bits* publication. This reading accounts for the obvious fact that some of the science in "Ithaca" is mock learning, yet even this more pseudo-scientific information has been apparently memorized in a tour-de-force rehearsal in the way of autistic savants, who are able to recall exact passages of prose with prodigious and accurate photographic memories.

There are clear parallels between the narrative style in "Ithaca" and Aspergian sensibility if we look closely at this episode. This is a mind built for trainspotting, the practice of collecting all different trains on a timetable with an obsessive precision, a practice that commonly acknowledged as an interest among those with Asperger's. The irony here is that it required the same sort of energy for Joyce to compose this chapter. Joyce's genius includes a gift for making and building lists of all kinds, whether or not he experienced Asperger's syndrome himself. The narrative voice in "Ithaca," a disembodied intelligence, shares with Bloom a distinct enjoyment of relating the achievements of Dublin's civic infrastructure, its waterways, and an exceptional variety of scientific information.

Plotting Stephen and Bloom's Movements in "Ithaca"

However, between the simple categories of a young Stephen and the most Baroque and pedantic responses in "Ithaca" lies a common assumption that objects can be placed in relation to the world, and in relation to one another successfully. Throughout *Ulysses*, in its allusions to science—for example, Bloom pondering gravity at thirty-two feet per second per second, "the law of falling bodies" in Hades, an allusion that is reprised in "Circe" as he goes to trial—are also solidly in the realm of classical physics (Joyce 1993, 59).

Indeed, "Ithaca" would seem to be an episode that obsesses about tracking the precise movements of its two protagonists, Stephen and Bloom, as they approach and enter the house at Eccles Street. The belief that one could place objects with such knowable precision is exactly the stuff of Newton's classical physics and also of autistic writers who have noted an obsession with diagrams, maps, and visualizations of reality as a means for mastery. Moreover, the narrative intelligence here delights at being able to catalogue the relative position of objects with great, exacting precision, starting with its very first question:

> What parallel courses did Bloom and Stephen follow re-turning? Starting united both at normal walking pace from Beresford place they followed in the order named Lower and Middle Gardiner streets and Mountjoy square, west: then, at reduced pace [...] Approaching, disparate, at relaxed walking place they crossed both the circus before George's church diametrically, the chord in any circle being less than the arc which it subtends. (Joyce 1993, 544)

We have a different mind on display here, one able to plot the positions of persons and objects in knowable, Cartesian space and time with absolute confidence. Not only does the narrative enjoy placing objects (Stephen and Bloom) with one another, but it also delights in rehearsing place names. Of course, there is every sense that the verbal mapping that goes on here is entirely accurate against the real streets of Dublin.

In the over-precision of "Ithaca," the characters' movements are precisely plotted against the backdrop of Dublin. Throughout *Ulysses*, Joyce never abandons an allegiance to a representation of Dublin in its "real" geographical and historical coordinates. One of the novel's achievements is that despite the stylistic experimentation of the later chapters, the reader is still anchored to the project of mapping presented here: representing Dublin at a certain point in actual history. In fact, moving bodies—the walking figures of Bloom and Stephen—are mapped with great precision in "Ithaca" and the *techne* of applied science like hydraulics—for the water system of Dublin, for example—exhibits a clear enthusiasm for urban technical improvements. Throughout this chapter, Bloom's (and Stephen's) agency is challenged by an obsessive narrative intelligence based on science. This trajectory mimics a certain realization of the individual's insignificance against impersonal natural forces, and a subsequent relief—and perhaps recovery—as Bloom recovers his individuality at the end of the chapter. The narrative voice describes great distances and the human subjects under scrutiny—especially Bloom—are held up to a great, impersonal, and, indeed, an almost terrifying Universe. Several sets of questions provide another moment of attempting to understand a character by location as when Stephen places himself in *A Portrait of the Artist as a Young Man* ([1918] 2000) or when we can follow the precise mapping of the movements and activities of Stephen and Bloom in "Ithaca" early in this chapter. This time the effect is arguably one of pondering the vast scale of the natural in astrophysical dimensions and human insignificance in the face of it:

> What spectacle confronted them when they, first the host, then the guest, emerged silently, doubly dark, from obscurity by a passage from the rear of the house into the penumbra of the garden? The heaventree of stars hung with humid nightblue fruit. (Joyce 1993, 573)

Treating the stars as "humid nightblue fruit" is as ambitious and original a metaphor as we can hope to find in the novel. The use of kennings here in several coined words hints, I think, as it usually does in Joyce, at an attempt to use language inventively and, indeed, playfully. As both Walker and Fitzgerald (2006) and Brown (2009) note, in the clinical description of Asperger's and autism, those on the spectrum enjoy playing with language, repeating and rhyming phrases, and even making up new words and languages as in the new kennings here.

The consideration of humankind's place in the Universe follows:

> With what meditations did Bloom accompany his demonstration to his companion of various constellations? Meditations of evolution increasingly vaster: of the moon invisible in incipient lunation, approaching perigee: of the infinite lattiginous scintillating uncondensed milky way. (Joyce 1993, 573)

The narrative intelligence then treats us to a disquisition on several astronomical distances for stars in major constellations (like Canis Major and Orion) where distances are measured in

lightyears (the vast distance light travels in one year). Here, we learn that ten lightyears is fifty-seven quadrillion miles (573). We conclude with Bloom's meditations on the smallness of human agency in the wide astronomical sky:

> Of our system plunging towards the constellation of Hercules: of the parallax or parallactic drift of socalled fixed stars, in reality evermoving from immeasurably remote eons to infinitely remote futures in comparison with *which the years, threescore and ten, of allotted human life formed a parenthesis of infinitesimal brevity*. (573, my emphasis)

For anyone who has looked up at the night sky and wondered about our place in the stars, the passage above reflects on the different time scales of an impersonal Universe and our human lifespans. As in mapping his characters against the backdrop Dublin's urban spaces, the narrative intelligence of "Ithaca" might easily seem trivial. However, as presented here, Joyce is able to situate Bloom and Stephen in the wider cosmos with apparent precision. There is never any doubt of their place in the Universe, even their inner experience is not available to us, although the overlapping astronomical distances and heavenly bodies makes this effort at location a good deal harder to understand than Stephen's simpler categories in his geography book.

Next, the subsequent questions in "Ithaca" move the other way, back toward the infinitesimal: "Were there obverse meditations of involution increasingly less vast?" (Joyce 1993, 573). This next answer begins with a meditation on "eons of geological periods recorded in the stratifications of the earth" and follows up the matter by a specious hierarchy of "microbes, germs, bacteria" to "trillions and billions of incalculable molecules" to human blood cells:

> themselves universes of void space constellated with other bodies, each, in continuity, its universe of divisible component bodies which each was again divisible in divisions of redivisable component bodies, dividends and divisors ever diminishing without actual division till, if the progress were carried far enough, nought nowhere was never reached. (573–74)

We might note the comical effect here of a mock wonder at the tiny world of blood cells, which, it seems, could be subdivided forever. The narrative intelligence, which is so keen on precision with astronomical distances, seems vague on the numbers here ("trillions and billions").

By interpolating the distancing scientific voice here, Joyce reminds us of our frailty as a species in the face of impersonal universal scientific laws. While the effect in Stephen's notebook is to orient both the young protagonist of *A Portrait of the Artist as a Young Man* ([1918] 2000) and the reader to a place in the world with a certain comfort, the effect of the location here is just the opposite. The voice of "Ithaca" is by turns whimsical, pedantic, fanciful, but by the end of the episode, it achieves a somber aspect that reveals Bloom and Stephen as very minor entities, both lost in the "cold of interstellar space" (Joyce 1993, 578).

In my reading offered here, the questions in "Ithaca" subject these characters to rapid changes in the scale of perception. The narrative intelligence dismantles our sense of Bloom and Stephen as human beings and leaves us with scientific detail, which is, after all, still part of the natural world. The characters with whom we have spent so much time earlier in the novel are somewhat lost to us in "Ithaca," dismantled by geographical, astronomical, or mathematical description, and Bloom is finally reduced to a single, silent point at the end of this chapter as he falls asleep after his very long day. Bloom's meditation on the place of the human in interstellar space and in the biological kingdom are reprised and echoed by the later questions which follow Bloom as he goes to bed, describing his bedroom, his personal items, photographs, mementos, and books (Joyce 1993, 581–82). However, as two of the question and answers tell us, there are hints that Bloom still manages to find a measure of "satisfaction," comfort, and then sleep at the end of his long day, despite the previous rhetorical onslaught of scientific narrative intelligence

in "Ithaca" (585, 604–07). As Bloom finally dozes off, the relentless rhetoric and classifying intelligence no longer seems to hold sway. To my mind, Bloom has recovered a simple dignity. Of course, both men witness the same shooting star as they part ways after relieving themselves in Bloom's garden; in all, hardly a sentimental rendering of their good-bye (577).

Intriguingly, in a possible psychobiographical aspect here—apart from Asperger's, Walker and Fitzgerald (2006) note that Joyce employed a stenographer for collecting his father's memories of Dublin—as a set of questions and answers conducted by a third-party interviewer. This possibility that the form of "Ithaca" also partakes of this exercise seems suggestive to me, especially as Bloom and Stephen are figurative father and son (Odysseus and Telemachus) in the scheme of the Homeric parallel, yet as in real life, Joyce would not visit his father in Dublin. The distant, thwarted meeting of Bloom and Stephen in Eccles Street refracted through the scientific rhetoric of "Ithaca's" narrative style imparts a further distance that reflects perhaps Joyce's relationship with his own father.

For any twentieth-century writer, it is difficult to describe a beautiful night sky without sinking into melodrama or cliché. Certainly, as an assiduous Modernist, Joyce was suspicious of such fictional manipulations. However, as the writing in "Ithaca" shows, Joyce can render a certain formal beauty by triangulating among reader, writer, and the mimetic impulse by using allusions borrowed from a variety of sciences. Like the autistic savant writer Daniel Tammet, who finds new beauty using number and pattern in such ordinary phenomena as snowflakes or chess or, like the narrator voice of "Ithaca," the night sky, the narrative sensibility here continually connects mathematical and scientific experience to an ordinary night in Dublin, to the ordinary fabric of experience while putting an extraordinary intelligence on display. But it is an intelligence that is much more interested in scientific detail—and relatively uninterested in human emotions or motivations that usually comprise the traditional experience of reading fiction.

Mapping and Plotting in Tammet, Haddon, and the Digital Humanities

In one of his essay collections *Thinking in Numbers* (2012), the autistic savant and accomplished British writer Daniel Tammet echoes the strategy of "Ithaca" to investigate the personality of his mother. In this poignant essay, on maternal love and the impossibility of emotional mindreading when one experiences full-blown autism, Tammet attempts unsuccessfully to guess what his mother will order at a restaurant, a moment that signifies his inability generally to read his mother's mind. He writes: "We have had my lifetime to get to know each other, but it still feels nowhere long enough. Her behavior eludes me; it outpaces my powers of comprehension. Try as I might, I cannot figure her out" (Tammet 2012, 206). His solution is to think in terms of plotting his mother's movements through the city as she goes to work, runs errands, and shops. Instead of replaying visual memories to understand human emotions, a strategy employed by the notable autistic Temple Grandin and others, Tammet turns to his training and keen interest in mathematics (this is a writer who in another chapter describes what it is like to recite thousands of digits of pi while being recorded for British television.) He continues:

> A mathematician would say, "Graph the data." [...] I decided that if only I could assemble enough of my observations, and settle on some parameters for their analysis, it might be possible to make a predictive model of my mother's behavior [...] I took to mapping her movements [...] Perhaps she noticed me tracking her and wished to catch me out, or perhaps she simply grew bored with her own repetition, but for whatever reason she would sometimes decide to mix it all up. (207–08)

After observing and recording his mother's movements, Tammet develops a model of her, his "imaginary mother," which he realizes finally is not the real person at all.

The struggle in this essay is the fundamental unknowability of the thoughts of a close relative for someone on the spectrum. Despite his mapmaking, his mother's mind remains a mystery, and he is unable at the end of the essay to guess what she will order for dinner or dessert at a restaurant. His "imaginary mother" constructed of data points and observations cannot predict the future decision of the real person, even after several decades of their relationship. There is a readily available parallel here in all the plotting of Stephen and Bloom by the apparently brilliant narrative intelligence of "Ithaca," which despite the surface precision, cannot overcome the barrier of reading characters' minds within this chapter.

Similarly, Christopher John Francis Boone, the adolescent first-person narrator and protagonist of Mark Haddon's popular and critically praised 2003 novel *The Curious Incident of the Dog in the Night-Time*, turns to making maps to solve and understand his world, first to solve the mystery of the neighbor's murdered dog and later to be able to overcome bewilderment as he navigates the unfamiliar terrain of a train station en route to find his mother in London. Plotting and visualizing experience is one way to master complexity of experience (as the early mapmakers would tell us, and as any Newtonian scientist would suggest—plotting data is a means to simplify, to give order to apparent chaos). The effort to "mind read," as we know from accounts of autistics who have learned to read minds by other means, must come from other strategies, which are often visual.[6]

More speculatively, for anyone acquainted with the growth of digital humanities and its "distant reading," whether Stephen Ramsay's de-formations or Franco Moretti's maps, trees, and graphs, it would seem that a mind on the spectrum anticipates the twenty-first century ways of reading. Digital humanities researchers often investigate texts visually (with the aforementioned graphical analyses), plotting the movements of characters in a play like *Hamlet*, or counting words. They discover patterns that can only be ascertained by machines (or by minds on the spectrum who show a similar delight in pattern and number). Stephen Ramsay (2011, 33) observes: "Algorithmic criticism attempts to employ the rigid, inexorable, uncompromising logic of algorithmic transformation as the constraint under which critical vision may flourish." The strategies of distant reading in the digital humanities echo a fascination with pattern and number in Aspergian writing. Until computers emulate a Theory of Mind, which may be a distinct possibility as research in artificial intelligence progresses, for the present, computer-generated readings of texts are necessarily mindblind.

To reiterate, by defamiliarizing typical readerly experience with mapping, plotting, and visualization, the mindblindness of the Aspergian writing on display in Joyce's "Ithaca" episode displays a sensibility that sees the world in entirely new ways, which is echoed in recent writing by autistic writers—and writers like Haddon who represent autistic characters—in similar exercises in plotting and visualization. In the twenty-first century, distant reading in digital humanities scholarship also casts aside obvious reading strategies involving the Theory of Mind and has instead invited us to see old texts in fascinating new ways through maps and visualizations, and in doing so, has supplanted a more naive, humanistic, and neurotypical way of reading.

[6] Temple Grandin's *Thinking in Pictures* (2006) describes the centrality of visual thinking for her life, career, and for other autistics. However, visual tools are not universally appreciated. Naoki Higashida in *The Reason I Jump: The Inner Voice of a Thirteen-Year-Old Boy with Autism* (2013) argues against rigid visual diagrams and schedules in educational settings.

Another Walk Under the Stars: Joyce, Anderson, and *The Little Review*

In the final, valedictory issue of *The Little Review* published in Spring 1929, its editors Margaret Anderson and Jane Heap asked several dozen well-known and lesser-known figures in Modernism ten apparently simple questions. Their "questionnaire" included these queries:

> 1. What should you most like to do, to know, to be? (In case you are not satisfied.) [...]
> 3. What do you look forward to? [...]
> 7. What things do you really like? Dislike? [...]
> 8. What is your attitude toward art today? What is your world view? (Are you a reasonable being in a reasonable scheme?) [...]
> 10. Why do you go on living?" (Anderson and Heap 1929, 48)

The set of respondents included figures whose work had appeared in the magazine alongside other working artists of the period. Participants included many Modernists in literature and the arts, such as H. D., Wyndham Lewis, Mina Loy, Dorothy Richardson, William Carlos Williams, Jean Cocteau, Emma Goldman (who had figured early in the history of *The Little Review*, which had defended her work), the painter Joseph Stella, the composer George Antheil, and lesser figures like Max Bodenheim, Ben Hecht, and the Dadist Elsa Baroness von Freytag-Loringhoven (who had died in 1927). The compendium of responses included photographic portraits of each figure, a good many taken by Berenice Abbott and Man Ray. The candid, sometimes improvisational, nature of their responses—and the fact that many of the answers to the questionnaire amount to short manifestoes about the state of writing or art and often the biographical struggles and strivings of some fifty creative figures—give us a sense of culture in 1929.[7]

Of course, *The Little Review* is perhaps best remembered for serializing *Ulysses* (at least up through the beginnings of the "Oxen in the Sun" episode as the alleged obscenity of "Nausicaa" resulted in getting it in a New York City court and its publication suspended). Thus, it was only natural that Anderson and Heap asked Joyce for his responses, something that was even more possible since all three figures were all residing at Paris at the time. Instead of his responses, however, or an entire short essay as most—though not all—contributors seemed to have managed, Joyce plays coy with his answers. He writes: "I have been away in Toulon and have been overloaded with work since I came back. Can you both please come here for tea on Monday when we can talk over the questionnaire? Sincerely yours, James Joyce" (Anderson and Heap 1929, 50). The editors then add: "Mr. Joyce decided to produce his answers after tea, or during his evening walk along the rue de Grenelle. Later he telephoned that he really could find nothing to say" (50). The editors then reprinted a galley proof of two pages from *Finnegans Wake* ([1939] 1999) (still entitled *Work in Progress*) from the first issue of *Transition Quarterly* magazine riddled with edits and emendations that are truly dizzying to behold. If anything, the level of detail in ink with lines connecting changes in the obscure "nightspeak" of *Finnegans Wake* with all its multilingual kennings make for a genuine challenge for Joyce's typesetters. These two pages suggest the author was indeed very busy on his next project.

[7] This final issue of *The Little Review* is fascinating on its own for its glimpse into the lives of several prominent modernists. For example, William Carlos Williams, a practicing doctor, confesses a wish to quit medicine and write full time. The eminent philosopher Bertrand Russell expresses a wish to do physics. T. S. Eliot uses his response to lament the passing of time and another small magazine. Djuna Barnes refuses to answer. The American Midwestern poet Max Bodenheim lets loose a veritable screed against the literary market—he mentions getting 600 rejection slips before getting his poetry published. If anything, these responses remind us that working artists of the period faced many struggles in their careers, and the single-mindedness attributed to Joyce in pursuit of his work attributed to Asperger's was certainly not unique among artists of the period.

I find it suggestive that Joyce signals awareness of social graces in a request to meet for tea with his long-time allies and acquaintances. The implied emotional warmth here in asking Anderson and Heap to tea does not immediately suggest an Aspergian sensibility in my reading, though the closing in the letter might seem just a bit distant. More significantly here, Anderson's comment that Joyce might have rendered his answers on an evening walk echoes the exact framing of "Ithaca," a walk under the stars answering set questions. Alas, this was not to be, as the pages from *Finnegans Wake* ([1939] 1999) are what the reader is left with and here we have evidence of an intense artistic sensibility—of an artist consumed with work at the expense of all other things (which we know from Joyce's long struggle to finish his final novel).

While we might doubt that Joyce actually fit the clinical definition of Asperger's syndrome, as an obsessive chronicler of his world, he must have known people on the spectrum, or he saw the same habits in his own mind. In "Ithaca," there is finally recognition of the value and beauty of a mind and sensibility on the spectrum as some of canonical writers undoubtedly were. In all, we benefit from the Aspergian sensibility, which Joyce chose to include in one of his boldest experiments in *Ulysses*, a chapter that challenges us to think anew about experiencing another aspect of what it means to be human. At one point in her reading, Marilyn French (1976, 221) describes the narrator in "Ithaca" as "inhuman"—but in only twenty years, the difference of a mind like Temple Grandin's has become something to understand and admire. The literature of autism and Asperger's is alive and well as a distinctive genre of writing today though writers like Daniel Tammet, a growing number of autobiographies by autistic writers, and a general sense that being on the spectrum can be an advantage for perceiving the world anew. Joyce's "Ithaca" offers an inclusive vision that recognizes the value of differently abled minds that can dazzle us with detail, with new ways of mapping our experience and new ways of understanding an apparently ordinary walk in the city. These new models and paradigms, which usually stress the visual or the mathematical over the Theories of Mind, are actually not blind at all. In fact, it is us, perhaps neurotypical, innumerate, and trained in the traditional humanities, who have been missing these other realms of experience, order, beauty, and pattern that were there all along, but we could not discern without the help of new seers like Joyce, Tammet, and other writers familiar with Aspergian writing. These writers illuminate a new terrain of previously overlooked textual and imaginative human experience through the lens of a sensibility that is on the spectrum.

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