



Article

Character's mental functioning during a 'neuro-transition': Pragmatic failures in *Flowers for Algernon*

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Abstract

The representation of fictional minds that work in idiosyncratic ways has received significant attention in the past few decades, particularly regarding characters with some form of developmental delay or pathological disorder. The present paper attempts to investigate the mental functioning of the central character in Daniel Keyes's widely acclaimed short-story *Flowers for Algernon*, which presents two versions of the same character: after being introduced as cognitively delayed and with a very low IQ, a futuristic treatment turns him into a neurotypical individual first, and into a genius later. With the unfolding of the plot, however, it soon becomes clear that the character's mental gains are doomed to deteriorate by the end of the story, when he finds himself as cognitively delayed as he was at the beginning. By building on previous research, this paper is concerned with the effects of drastic changes in mind style in the course of the same story. More particularly, the final aim of this article is to study whether an abrupt shift in mind style may bear consequences on the character's ability to interact with the other characters. Mental schemata and adherence/flouting of Grice's maxims are closely investigated in the two versions of the characters, together with analyses of deictical patterns carried out by means of corpus techniques.

Keywords

cognitive stylistics, underlexicalization, mental functioning, pragmatic failure, personal deixis

I put Algernon's body in a cheese box and buried him in the back yard. I cried (Flowers for Algernon: 302).

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I. Introduction

In the last decades, the narrative representation of fictional minds that work in distinctive ways has received significant attention (Fludernik, 2003; Margolin, 2003; Semino, 2014), especially after medical diagnoses have increased public attention on pathological disorders like autism, Asperger syndrome and developmental delays in general (Dillenburger et al., 2013; McKeever, 2013).

More specifically, stylisticians and narratologists who incorporate cognitive elements into their analyses have often focused on the notions of ‘mental functioning’ (Palmer, 2004) and ‘mind style’ (Leech and Short, 2007), a concept which was first introduced by Fowler (1977: 103) as ‘any distinctive linguistic representation of an individual mental self’. Peculiar mind styles have been addressed by studying several aspects of characters’ linguistic behaviour, including conversation behaviour (Culpeper 2014; Jeffries and McIntyre, 2010), transitivity patterns (Halliday, 1981; Nuttall, 2019), speech representation (Leech and Short, 2007), figurative language (Semino, 2002; Semino and Steen, 2008; Semino and Swindlehurst, 1996), pragmatic competence (Semino, 2014; Thomas, 1983), deixis (Semino, 2011), and point of view (Dan McIntyre, 2006; Trevisan, 2010). By building on some of this previous research, this paper is concerned with the effects of drastic changes in mind style in the course of the same story. More particularly, the final aim of this article is to study whether an abrupt shift in mind style may bear consequences on the character’s ability to interact with the other characters.

This is especially evident in Daniel Keyes’s widely acclaimed story *Flowers for Algernon*, which describes a neurochallenge that turns the protagonist Charlie into a neurotypical subject, starting from a condition of severe developmental delay. In particular, a surgery already tested successfully on Charlie’s alter-ego Algernon – a mouse who is initially able to beat Charlie in many intelligence games – is supposed to significantly enhance his IQ, which only reaches 68 at the beginning of the story. After what seems to be an initial failure, it soon becomes clear that Charlie’s transition will not only turn him into a neurotypical individual, but will also transform him into a genius whose mental functioning cannot be compared to any of the other characters in the story-world, including the experimenters themselves. As the story unfolds, however, Charlie notices that Algernon’s intelligence starts to slowly decrease, and through a series of highly sophisticated scientific argumentations he comes to the conclusion that the futuristic treatment he and Algernon have received will not last for long. His brain indeed undergoes a severe deterioration which, by the end of the story, results in the character being as cognitively delayed as he was at the beginning.¹

Interestingly enough, besides receiving significant critical attention for the topics addressed, the story has also been repeatedly referred to by a number of medical studies focussing on the so-called ‘Algernon phenomenon’ (Ghoshal and Wilkinson, 2017; Levine, 2008; Sanders, 2012), a neurological condition that affects learning and memory processes and may entail autism spectrum disorder, schizophrenia, general developmental delays.

In the remaining part of the paper, Charlie’s transition towards enhanced cognition (and back) is investigated by a close scrutiny of the changes occurring in his use of language. In particular, Section 2 focuses on pragmatic (in)competence in both versions of

Charlie, starting from the analysis of mental schemata and speech acts; [Section 3](#) investigates the use of personal deictic patterns in both versions of the character. The analysis of deictic patterns has been carried out using W-matrix online (<https://ucrel-wmatrix4.lancaster.ac.uk/>), the corpus tool developed by Paul Rayson at the University of Lancaster (UK).

2. Pragmatic (in)competence: The role of mental schemata and speech acts

In one of the ‘progress reports’ opening the story, Charlie’s general inability to make sense of what is meant by the words of the other characters is immediately made clear. In what he erroneously spells ‘Progris riport’, he indeed observes:

- (1) Dr Strauss said I had something that was very good. He said I had a good *motor-vation*. I never even knew I had that. I felt proud when he said that not every body with an eye-q of 68 had that thing. I dont know what it is or where I got it but he said Algernon had it too. Algernons *motor-vation* is the cheese they put in his box. But it cant be that because I didnt eat any cheese this week (Keyes, 1959: 287 misspellings in the original).

In this part of the story, Charlie is still in a condition of severe developmental delay, which also explains why he is unable to spell words properly. Examples in this sense include ‘eye-q’ for ‘IQ’, or ‘motor-variation’ for ‘motivation’. In Fowler’s terms (1996: 152), the character’s language displays ‘underlexicalisation’, that is, the inability to properly use the lexical items normally shared among the speakers of a particular language. This, Fowler argues, suggests that the individual lacks the relevant concept and is likely to provide readers with clues regarding the distinctive way in which his/her mind works (Semino, 2002, 2011). At this point in the plot, underlexicalisation concerns Charlie’s lack of knowledge of scientific language, but there is more: as can be observed in the extract, the grammatical structures he uses tend to be fairly simple and repetitive (‘Dr Strauss said’, ‘He said’, ‘I felt proud when he said’), a fact that contributes to the readers’ own perception of the character’s particular mental functioning.

Charlie’s inability to properly elaborate the content of Dr Strauss’s explanation can be better understood in the light of schema theory, a model of human knowledge developed in cognitive psychology to analyse world comprehension. The main tenet of the theory is that new experiences are largely understood by relying on the activation of prior knowledge. In other words, comprehension of unfamiliar situations occurs by relating current inputs to already existing mental representations, namely to ‘an organized packet of information about the world, events, or people, stored in long-term memory’ (Eysenck and Keane, 2000: 531–536). Therefore, in order to properly make sense of a particular situation, it is essential to both possess and activate the schema or schemata that are appropriate to that specific context.

Crucially, Charlie cannot understand Dr Strauss’s words because he lacks the proper schemata for this particular domain: as a matter of fact, the Doctor tells him that the mouse’s motivation is driven by the cheese the researchers put in his box, but Charlie is not familiar with scientific experiments, therefore he bases his assumptions solely on the comparison between himself and the mouse. Since the outset of the story, then, the

combination of underlexicalisation and the lack of proper schemata contribute to the projection of a peculiar, non-standard mind style for the character.

Similar phenomena can be observed in other parts of the story. Extract 2, for example, describes Charlie's pragmatic difficulties during a night out with his colleagues from the factory:

- (2) Everybody laffed and we had a good time and they gave me lots of drinks and Joe said Charlie is a card when hes potted. I dont know what that means but everybody likes me and we have fun. I cant wait to be smart like my best frends Joe Carp and Frank Reilly (Keyes, 1959: 290 misspellings in the original, my emphasis).

Here, misunderstanding originates from Charlie being underlexicalised in areas people his age are generally familiar with: in particular, as he explicitly states, the expression 'Charlie is a card when hes potted' sounds totally obscure to him, thus preventing him from making sense of the events occurring in the 'actual domain' of the story – that is, his colleagues making fun of him. As a consequence of this, despite fully enjoying the situation in his private 'subworld',² Charlie exhibits severe communication problems without being aware of it – in this case, he erroneously believes his co-workers are also his close friends. Incidentally, the expression 'Charlie is a card when hes potted' is also a metaphor, and there is evidence that real-life people with Charlie's type of disease are impaired in the cognitive elaboration of figurative language and inferred meaning, along with exhibiting difficulties in narrative production (De Felice et al., 2018).³

Charlie's communicative difficulties, however, are not due to lack of proper lexical knowledge or schemata only. As progress report 8 (extract 3 below) shows, there are situations in which the words sound clear to him, yet he finds it hard to make sense of the situation:

- (3) Sometimes somebody will say hey look at Joe or Frank or George **he really pulled a Charlie Gordon**. I dont know why they say that but they always laff. This morning Amos Borg who is the 4 man at Donnegans used my name when he shouted at Ernie the office boy. Ernie lost a package. He said Ernie for godsake what are you trying to be Charlie Gordon. I dont understand why he said that. I never lost any packages (Keyes, 1959: 289 misspellings in the original, my emphasis).

According to Thomas (1983: 92), linguistic competence encompasses both 'grammatical competence' and 'pragmatic competence', the latter coinciding with the 'inability to understand what is meant by what is said'. Expanding on this, Semino (2014: 156) has shown how the notion of 'pragmatic failure' is not only relevant to the difficulties experienced by non-native speakers communicating in a new culture but can usefully be extended to the difficulties experienced by anyone (whether real or fictional) who does not share the knowledge and mind-reading abilities that are normally taken for granted in conversation. Difficulties in literary characters' conversational interactions or in making sense of the narrated world (pragmatic failures), she argues, strongly contribute to the projection of particular, unorthodox mind styles.

This is particularly true for Charlie in this part of the story, as he consistently fails both from the grammatical and from the pragmatic point of view: apart from the lexicogrammatical inaccuracies already observed, he finds it hard to make sense of the situation in the story-world even when the meaning of all the words spoken is clear to him. In extract 3, for example, his inability to understand what goes on is not the consequence of unfamiliar lexical items but is rather to be attributed to pragmatic incompetence. Despite his colleagues clearly teasing him by associating his name to various types of failures, he repeatedly points out that he does not understand why they do so. Besides producing ironic effects, pragmatic failures shed significant light on Charlie's mind style, and are therefore crucial for the reader's mental representation of the character⁴: he is likely to be perceived as exhibiting a non-standard, unorthodox mental functioning, struggling considerably with the possibility of making sense both of the events around him and of the other people's thoughts. The lack of this basic ability, taken for granted in neurotypical individuals, prevents him from establishing relations with people, despite a strong will to do so.

Quite interestingly, this situation starts to change after the surgery, as extract 4 shows. Charlie is out with his colleagues again and, similarly to the previous time, everyone is making fun of him after getting him drunk:

- (4) I didn't know what to do or where to turn. Everyone was looking at me and laughing and I felt naked. I wanted to hide myself. I ran out into the street and I threw up. Then I walked home (Keyes, 1959: 293).

As the improvements in language testify, the neurotransition has already begun to produce changes in Charlie's perceptions: despite this, he still finds it difficult to make proper sense of the situation he is experiencing. Unlike the previous night out, however, he seems to have now developed an increased awareness of the social dynamics he is involved with. As a matter of fact, despite pointing out that he does not know what to do, he feels 'naked' and wants to hide himself, therefore he is clearly aware that his colleagues are teasing him. In cognitive terms, a particular PARTY WITH COLLEAGUES mental schema has now begun to be formed and activated in his mind: this helps him make more sense of what is happening to him, even if pragmatic difficulties still persist. His mental improvement goes hand-in-hand with improvements in language competence: although still fairly simple, grammar is now accurate and there are no misspellings. Additionally, he seems now able to also produce metaphorical expressions, for example, 'I felt naked'.

This newly-acquired ability to better make sense of social situations is even clearer in the 'progress report' produced by Charlie shortly after:

- (5) It's a funny thing I never knew that Joe and Frank and the others liked to have me around all the time to make fun of me. Now I know what it means when they say "to pull a Charlie Gordon." I'm ashamed (Keyes, 1959: 293).

[...]

- (6) Still didn't go into the factory. I told Mrs. Flynn my landlady to call and tell Mr. Donnegan I was sick. Mrs. Flynn looks at me very funny lately like she's scared of me (Keyes, 1959: 293).

As extract 5 shows, Charlie can now distinctively understand the reasons why his colleagues want to spend time with him: in schema terms, a ‘disruption’ – that is, a situation that challenges the previous schemata (Cook, 1990: 223) has occurred – thus resulting in schema change, a phenomenon called ‘schema refreshment’ (Cook, 1990: 223). The destruction of the old schemata and creation of new ones is clearly to be attributed partly to the repeated exposure to very similar situations, but is mostly due to the amelioration of his cognitive abilities following Dr Strauss’s treatment. As a result, he is now also able to also make sense of the metaphorical expression ‘to pull a Charlie Gordon’ which was previously obscure to him. Socially speaking, however, he is still experiencing severe difficulties, as extract 6 shows: despite being now quite smart, he refuses to go to work in order to avoid contact with his colleagues. Additionally, he also seems disturbed by the fact that Mrs Flynn’s attitude towards him has somehow changed.

Very interestingly, then, the drastic shift in mental abilities we have started to witness does not seem to entail a similar shift in pragmatic competence. Indeed, even after the futuristic treatment has turned him into a genius, Charlie is still socially quite inadequate and fails to properly cooperate in different situation types. In extract 7 below, for example, he is reflecting upon a recent exchange he has had with Dr Strauss, someone he used to have great admiration for. In extract 8, on the other hand, he is reporting an interaction with Miss Kinnian, the teacher who helped him when he was struggling with reading and writing and who is now his only friend (and someone he is in love with):

(7) I was shocked to learn that the only ancient languages he could read were Latin, Greek, and Hebrew, and that he knows almost nothing of mathematics beyond the elementary levels of the calculus of variation. **I found myself almost annoyed.** It was as if he’d hidden this part of himself in order to deceive me, pretending – as do many people (Keyes, 1959: 297-298 my emphasis).

(8) I tried to avoid all discussions of intellectual concepts and to keep the conversation on a simple, everyday level, but she just stared at me blankly and asked what I meant about the mathematical variance equivalence in Dobermann’s *Fifth Concerto*. [...] **No matter what I try to discuss with her, I am unable to communicate.** [...] I must review Vrostadt’s equations on *Levels of Semantic Progression* (Keyes, 1959: 298 my emphasis).

Although Charlie realises that his cultural expertise is now much higher compared to the other characters’, he does not seem to be able to talk at their level, a reason why communication fails. In particular, he complains that Dr Strauss was not able to discuss mathematics beyond what he defines ‘elementary levels’, and that he could not speak languages other than Latin, Greek and Hebrew. Similarly, he seems frustrated by Miss Kinnian not being able to understand the notion of ‘mathematical variance equivalence’ in Dobermann’s *Fifth Concerto*. Clearly enough, the conversation with both of them flouts some of Grice’s maxims but he is not able to realise it. In particular, the conversation with Dr Strauss is not carried out ‘with reasonable dispatch’ by Charlie, who uses words and notions that sound totally obscure to his interlocutor and are much more ‘informative than is required’ (Grice, 1991: 26). Similarly, despite his intention to ‘keep the conversation on

a simple, everyday level' with Miss Kinnian, he cannot avoid using expressions which embarrass her, thus again producing a contribution sounding obscure and more informative than required.

Charlie's frustration in social situations becomes more and more severe with the abrupt surge in his IQ. In extract 9, for instance, the irritation due to the pragmatic failures he experiences is openly verbalised:

- (9) Dr Nemur appears to be uncomfortable around me. Sometimes when I try to talk to him, he just looks at me strangely and turns away. I was angry at first when Dr. Strauss told me I was giving Dr. Nemur an inferiority complex. [...] **I am unable to communicate. [...] I find I don't communicate with people much anymore.** Thank God for books and music and things I can think about (Keyes, 1959: 302 my emphasis).

The sentences 'I am unable to communicate', 'I find I don't communicate with people much anymore' clearly demonstrate that Charlie's psychological traits have drastically changed in this part of the story. Indeed, in the other version of the character pragmatic difficulties were mainly caused by his inability to understand the other characters, yet most of time he did not realise it and still enjoyed being around them, even when he was being teased. Here, on the other hand, pragmatic difficulties are mainly due to his incapacity to understand what the proper conversation level is: as a consequence, besides jeopardising his social relations, this also damages the other characters' positive face (Brown and Levinson, 1987), as Dr Nemur's 'inferiority complex' in extract 9 well testifies.

The social difficulties Charlie encounters in this part of the story are plausibly due to the drastic neurotransition following the treatment: besides turning him into a genius, the rapid change in his mental abilities has not given him sufficient time to develop proper schemata about what it means to be 'normal' in cultural terms. Schemas are indeed crucial cognitive models for interpreting information in a particular environment, yet they need to be acquired over time by means of 'assimilation' (whereby new information is incorporated into pre-existing schemas) and 'accommodation' processes (whereby existing schemas may be altered or replaced by new ones) – see Culpeper (2014: 71–80). The fact that Charlie's neurotransition has happened so abruptly seems to have had a critical impact on both process types.

In particular, Charlie has not had the possibility to adjust existing schemata to the radically new social environment he is experiencing now, therefore he only applies his own, very peculiar and newly-formed ones without questioning their validity. This is made quite clear in the following extracts:

- (10) Dr Strauss continually reminds me of the need to speak and write simply so that people will be able to understand me (Keyes, 1959: 297).
- (11) I must be careful to speak and write clearly and simply (Keyes, 1959: 298).
- (12) How was I to know that a highly respected psychoexperimentalist like Nemur was unacquainted with Hindustani and Chinese? It's absurd when you consider the work that is being done in India and China today in the very field of his study (Keyes, 1959: 298).

In extract 10, Charlie reflects upon the advice repeatedly formulated by his former mentor, Dr Strauss: as the text in extract 11 shows, he is aware of the importance of keeping the conversation at a simple level in order to avoid pragmatic difficulties, yet his words in extract 12 make it very clear that he does not have the capacity to do so, as his brain only primes schemata that originate from his current, very idiosyncratic background. Because of this, he cannot avoid being highly surprised about Nemur not being familiar with Hindustani and Chinese, to the point of even considering such situation ‘absurd’. The lack of assimilation and accumulation processes, in other words, generates confusion in ‘activity types’ (Culpeper and Haugh, 2014: 91)⁵: Charlie does not realise that the activities he is engaged with are just casual conversations, not academic conferences or scientific exchanges with colleagues sharing the same expertise level. As a consequence, he repeatedly feels frustrated for failing in social relations.

As the investigation of the conversational behaviour in both versions of the character shows, however, the difficulties arising from his interactional dynamics never have any manipulative or insidious purpose. On the contrary, he always seems obsessed with telling the truth, to the point of becoming uncooperative for his fear to flout the maxim of quality:

(13) She said make up stories about the pepul in the picturs. I told her how can you tell stories about pepul you never met. I said **why shud I make up lies. I never tell lies** [...] (Keyes, 1959: 286 misspellings in the original, my emphasis).

(14) I like to draw a picture of a man and a woman but **I wont make up lies about people** (Keyes, 1959: 288 misspellings in the original, my emphasis).

In both examples, Charlie is asked by his teacher and his doctors to invent some stories starting from some pictures. However, he processes these requests as an invitation to produce lies: because of his constant preoccupation with not saying ‘what you believe to be false’ (Grice, 1991: 26) he decides not to collaborate with them, thus creating social embarrassment.

Not surprisingly, then, Charlie never flouts the maxim of quality in the course of the whole story: this happens just once, after the neural deterioration has dramatically taken him back to the initial condition:

(15) Miss Kinnian came to the door but I said go away I dont want to see you. She cried and I cried too but I wouldnt let her in [...]. I told her I didn’t like her any more. I told her I didnt want to be smart any more. Thats not true I still love her and I still want to be smart but I had to say that so shed go away. She gave Mrs Flynn money to pay the rent. I dont want that (Keyes, 1959: 305–306).

By saying to Miss Kinnian, his only friend, that he does not like her anymore and that he does not want to be smart again, he indeed flouts the maxim of quality, yet it is very clear that his behaviour is not to be ascribed to a desire to obtain some advantage for himself. Rather, it may instead be interpreted in the light of Leech’s notion of ‘trade-off’ between the Politeness Principle and the Cooperative Principle (Culpeper and Haugh, 2014: 203): by flouting the maxim of quality, in other words, Charlie is still doing his best

to be polite through avoiding a situation in which both Miss Kinnian and himself may feel embarrassed and frustrated. Nonetheless, this type of conversational behaviour produces obstacles in his interactions with her.

On the other hand, as repeatedly observed above, Charlie's genius-like version has a tendency to flout both the maxim of manner and of quantity, yet this uncooperative behaviour is to be interpreted as a result of his inability to assess his addressees' actual level of cultural competence. Therefore, it can be interpreted as an 'infringement', that is, as an unintentional failure to observe a maxim (Grice, 1991: 26).

Overall, although resorting to very different linguistic patterns, both versions of the character use language in a way which is likely to project the mind style of someone who, for different reasons, is socially inadequate at all stages of his cognitive evolution, yet without ever overtly offending any other character. Even if Charlie is unable to successfully cooperate in conversational exchanges, readers hardly perceive him as someone who is intentionally impolite or wants to cause offence out of malice. As the plot unfolds, both before and after his cognitive enhancement, his social exchanges thus project the image of a harmless, rather vulnerable character, who does not possess the appropriate mental schemata to make sense of the situations he is experiencing, a fact mainly due to an almost total lack of previous exposure to social situations.

3. Deictic patterns and mental functioning

Fictional minds working in 'nonstandard' or 'unorthodox' ways have also been investigated through reference to the deictic expressions used by the characters. In particular, Bockting (1995) has discussed the relation between deixis and limited cognitive abilities in relation to Benjy, the central character in William Faulkner (1992), and Semino has used corpus techniques for analysing the way in which 'a breakdown of the deictic system' (2011: 423) may indicate the character's inability to understand others' perspectives and points of view – in other words, the character's pragmatic failures. More generally, as Stockwell (2005: 43–49) points out, deictic projections enable (or obstruct) readers to 'see' things from the character's perspective on an emotional and psychological level, which *affectively* 'colours the story-world and enables readers to respond accordingly'.

Starting from the assumption that corpus techniques can be crucial for the analysis of particular aspects of style (Bednarek 2011, Mahlberg 2012, McIntyre 2012, McIntyre and Walker 2019), the two versions of Charlie were investigated focusing primarily on personal deixis: in particular, since the character undergoes a drastic evolution in his cognitive capabilities to the point that his inborn mental deficiencies are first replaced by genius-like mental traits, and then deteriorated to the story initial condition, two texts were created: the first of them, called text 1, includes all the sections of the story in which Charlie is severely delayed (the initial and the final part of the story); the second of them, called text 2, includes the section in which the neurotransition has taken place, turning him into a genius-minded character (the central part of the story). The two texts contain 6719 and 5572 words, respectively.

To start with, in order to ascertain whether pronouns occupy a central part in one of the two texts, a keyness analysis of words was performed by means of W-matrix online. The

analysis revealed that the subject pronoun 'I' is overused in text 1, namely in the part in which Charlie is developmentally delayed: by occurring 485 times (versus 291 in text 2), it results in a log-likelihood of 19.15, which is a significant result. In order to collect more evidence on the use of personal deixis, the 'impaired' version of Charlie was also compared to the Imaginative Writing Section of the British National Corpus (BNC) sampler: the keyness analysis for individual words revealed that the personal pronoun 'I' is the top key-word in the story, with a log-likelihood of 516.71, a highly significant result: more precisely, 'I' had a relative frequency of 7.65 in text 1 and of 2.13 in the target corpus, therefore more than three times higher than in the reference corpus. Moreover, the object pronoun 'me' and the possessive adjective 'my' were also found to be overused, with a log-likelihood of 124.13 and 17.39, respectively. Crucially, the plural pronoun 'we' was absent both in the comparison for keyness between text 1 and text 2 (Charlie's two versions), and in the comparison between text 1 and the BNC sampler.

These findings are in line with previous ones investigating the use of deixis by characters with other types of impairments, such as Christopher in Mark Haddon's *The Curious Incident of the Dog in the Night-Time*, who suffers from Asperger's syndrome (see Semino, 2011): a typical situation characters with these types of impairment may experience is the difficulty in projecting deictically, a fact possibly revealing a lack of 'intermentality' potential for sharing mental states with others. In other words, it is as if these characters had not developed sufficient abilities to understand the workings of others' minds (Palmer, 2004; Semino, 2011: 434). To be noted, direct speech is not present in the story, therefore these results were not influenced by the presence of other characters' voices within the narrative.

In order to further investigate the relation between Charlie's language and his mental functioning, it was decided to conduct a POS (part of speech) keyness analysis between the two parts: it was noticed that nouns only rank in 25th position, with a very low log-likelihood. It was therefore decided to primarily focus on verbs, and in particular on the potential prevalence of some process types over others. This type of analysis can shed important light on characterisation, since the pervasiveness of a particular process may indicate, among other things, the character's inclination to be a 'doer' or a 'thinker', thus providing crucial information regarding his/her 'sociability'.

Quite interestingly, the analysis revealed that the most used verbs are 'mental processes' in Halliday and Mathiessen's terms (Halliday and Matthiessen, 2004), namely verbs evoking cognitive and emotional states and changes: 'I think', 'I mean', 'I suppose' (2nd, 3rd and 4th position, respectively). More generally, the analysis showed that mental processes are important in both versions of Charlie, suggesting a character more 'inwardly' than 'outwardly' oriented. In the 'delayed' version, however, the verb 'think' is overused, whereas the same verb is only in sixth position in the other version of the character: this is in line with the centrality of notions such as 'learning' and 'expertise' in version 2, and of 'reflection'/'contemplation' in the impaired version.

Overall, then, both the analysis of personal deixis and the POS one seemed to provide evidence that in text 1 Charlie tends to talk much more about himself and about what he thinks than in text 2, suggesting a rather egocentric mind style that is more prone to think than to act. As a consequence, he tends to be socially isolated. In particular, the corpus analysis clearly showed that in his severely impaired version, Charlie overuses personal

deixis, a fact which holds true also when the character's language is compared to the Imaginative section of the British National Corpus: this is likely to create the impression of someone who finds it very hard to project deictically, therefore to understand others' perspectives and points of view. This is in line with the character's vulnerability in social relations already observed in the previous parts of this study, and with the total lack of shifts from 'I' to 'we' revealed by the corpus analysis. Moreover, by highlighting the overuse of verbs of perception inwardly-oriented, the POS investigation provided more evidence of this phenomenon.

Quite interestingly, although to a lesser degree, personal deixis is also overused when the genius-like version of the character is compared to the Imaginative Writing Section of the British National Corpus (BNC) sampler (log-likelihood of 192), thus confirming the trend observed in version 1 of the character.

4. Concluding remarks

In this article, I have discussed the drastic shift in mind style of a character in the course of the same story. Previous research has shown how linguistic choices and patterns can convey unorthodox – yet still fairly stable – mind styles for characters, clearly explaining the correlation between mental functioning and communicative obstacles (Nuttall, 2019; Semino, 2011, 2014; Semino and Swindlehurst, 1996). The main aim of the present paper was to investigate potential changes in a character's pragmatic competence correlated to a radical change in mind style: as a matter of fact, the central character of this story experiences severe communicative difficulties in his initial condition of mental delay, but is soon turned into a cognitive genius, a fact which may potentially play a role in improving his social interactions.

In particular, it has been observed that the pragmatic failures Charlie experiences when he is cognitively impaired are to be ascribed to phenomena like underlexicalisation and lack of relevant schemata. Additionally, the lack of intermentality potential has been confirmed by a corpus investigation of personal deixis: personal pronouns and possessive pronouns are overused both when we compare the impaired version of Charlie with the genius-like one, and when we compare it with the Imaginative section of the British National Corpus. Overall, it has been argued, these phenomena project the mind style of a character who struggles considerably with understanding the events and the people around him, despite a certain inclination to connect with others. Ultimately, this highlights his vulnerability in social relations.

Things change significantly after the neurotransition has occurred: Charlie is now overlexicalised in all the fields he discusses and makes perfect sense of the situations and events around him. Moreover, corpus investigations show that personal deixis is underused compared to the other part of the story, thus suggesting a mind style that is more prone to share his mental states with the other characters. Against this backdrop, we might expect Charlie to be socially more skilful in this part of the story: however, this is not the case. Indeed, even in his genius version he experiences social difficulties at various levels, both with the doctors who treated him and with Miss Kinnian, his only friend. As argued in part 2, this is due to a lack of sufficient time for elaborating the proper mental schemata related to the situations and events he experiences in the 'normal' world. As a

consequence, he only relies on schemata that originate in his now over-developed mental condition and does not realise that the other people, even those he greatly admires, do not have his same background. Consequently, he uses over-technical terms and expressions that cause lack of understanding and embarrassment to the other characters, thus damaging their positive face. Ultimately, he is therefore heavily inadequate from the social point of view even when his IQ is very high.

In conclusion, I hope this paper has at least in part contributed to advances in the study of mind style and interpersonal communication among characters. First of all, it may have shown that mind style is not necessarily a stable notion but may vary significantly in the course of the same story. Secondly, as a consequence of the transition to a different mind style, linguistic patterns may drastically change, especially regarding under/overlexicalisation phenomena, personal deixis and the adherence to/flouting of Grice's maxims. Thirdly, and most importantly, a radical change in mind style may encompass pragmatic failures, although of a different nature.

Quite interestingly, both versions of the character have the power to defamiliarise readers' everyday conversational interaction, potentially refreshing their schemata (Cook, 1990. See also Semino 2014: 155). As a matter of fact, while reading the story, they have many chances to become more aware of the potential for misunderstanding that 'normal' people usually avoid successfully and automatically. Thanks to their fictional reading experience, in other words, readers can better make sense of the complexities of communication they are generally not conscious of, while at the same time becoming aware of the difficulties experienced by people who would not be classified as neurotypical individuals.

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Notes

1. Charlie's pathological disorder is a consequence of 'phenylketonuria', a real-life metabolic disorder resulting from mutations of a gene that causes a toxic build up in the brain and leads to a low IQ and consequent mental disorders.
2. The expressions 'actual domain' and 'private subworld' belong to Possible World Theory (Ryan, 1991) and are used to refer to the events of the main story, and to the private re-elaboration of those same events by a character.

3. The analysis of the metaphorical patterns in the story goes beyond the scope of this article. However, it is interesting to notice that, while in the first and in the last part of the story Charlie struggles to make sense of non-literal language, with obvious misunderstanding consequences, the smart version of the character perfectly understands metaphors and actually uses a language rich in metaphorical expressions: ‘Feeling of shame burning inside me’ (297), ‘Pushed out of my mind’ (299), ‘There are so many doors to open’ (300), ‘To cram a lifetime of research’ (301), ‘My contribution must rest upon the ashes’ (301) are just a few examples.
4. As regards characterisation, I share the current view within stylistics whereby characters are representations of imaginary beings in the minds of the audience. See [Culpeper \(2014\)](#).
5. An activity type is any culturally recognised activity [...] in which members are goal-defined and socially constituted [...]. Paradigmatic examples would be teaching, a job interview, a jural interrogation and so on ([Levinson, 1979](#): 69).

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