

Did Charles Dodgson suffer from Alice in Wonderland Syndrome?

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Review of :

Jan Dirk Blom, *Alice in Wonderland Syndrome*, Springer 2020.

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Jan Dirk Blom is a Dutch psychiatrist and a professor by special appointment of Clinical Psychopathology at Leiden University. As a psychiatrist he was consulted by people characterized by him as resp. “the man who sensed the world to be alive”, “the boy who saw everything as slanted” and “the woman who saw dragons”. They all appeared to experience symptoms of what is now known as ‘Alice in Wonderland Syndrome’ (in this review to be referred to as ‘AiW syndrome’).

AiW syndrome was, until recently, believed to be so rare that most university courses in medicine, psychology and the neurosciences did not even bother to address it. The first person who discerned the distinctive pattern of this syndrome was John Todd, a British consultant psychiatrist. He published about it in 1955 and gave the condition its name, drawing inspiration from the description of Alice’s particular changes, as described in 1865 in *Alice’s Adventures in Wonderland* by Charles Dodgson under his pen name Lewis Carroll.

Jan Dirk Blom remembers reading the book *Alice’s Adventures in Wonderland* (*AAiW*) as a child and being deeply impressed by it. He has reread it many times, also with his daughter, discovering with each reading new insights and delights.

And now he has written a really fascinating book about AiW syndrome. He draws on his experiences as a psychiatrist, his research and the gradually increasing number of scientific publications about the syndrome. It is the first state-of-the-art overview of the syndrome and its main objective is to increase awareness, by outlining the syndrome and explaining what is known about its neurological underpinnings. But there is more. In *AAiW* we find a description of at least 13 experiences which are similar to symptoms of the syndrome. And so Blom saw himself confronted with the following question: how great are the odds that a non-medical author would randomly describe these symptoms in a book written for the purpose of entertaining children, symptoms that were obscure at the time and for which it would take another 90 years before a psychiatrist would think of describing them in connection with one another? Charles Dodgson must have had intimate knowledge of these symptoms. Had he heard about them from someone else? Did he perhaps experience them himself? This is the second objective of the book: a re-examination of Charles Dodgson’s life and work to answer the question how he acquired his knowledge about these symptoms.

The book is interesting for both people with a medical point of view and Carrollians. Below I will present an abstract, but it is only partial, because it is mainly about the Carrollian aspects. The reason for this is not that the medical elements are boring or too

complicated: the opposite is true. However, I suspect that my readers are especially interested in the parts concerning Charles Dodgson. I also assume that they are familiar with the basic facts of his biography.

I am aware of the fact that this choice does not do justice to Blom's book. My abstract not only leaves aside many interesting and relevant details about Charles Dodgson, but above all it ignores the way Blom has intertwined the medical and Carrollian aspects. Their combination reads like a fascinating voyage of discovery and I cannot imagine otherwise than it being an important step in creating more awareness for AiW syndrome.

So if this review raises your interest, I strongly recommend getting hold of a copy of the book to read it as a whole, since you will find a lot of added value.

The syndrome

In 1955 John Todd was the first to publish about AiW syndrome. What he deserves credit for is that he grouped the symptoms together, recognized their interrelatedness as perceptual *distortions* rather than hallucinations or illusions and endowed that group of symptoms with a name. He used the term 'syndrome' since he suspected that the signs and symptoms observed to belong together.

Here is a brief overview of the symptoms, listed and described by Blom:

- Somesthetic distortions: distortions that effect the way we experience our body, for instance feeling your hands being reduced to the size of tiny stumps whenever you put them in your pocket, or feeling that they have grown so large that they seem to fill the entire room.
- Hyperschematia and hyposchematia: experiencing the space occupied by one's body as larger respectively smaller than it actually is.
- Derealisation and depersonalisation: derealisation is a distorted sense of reality; depersonalisation is the sensation of not being there, of experiencing oneself in an oddly detached way, for instance an experience as if one sees the world from behind a thick pane of glass.
- Somatopsychic duality: the experience that one does not reside in a single place. Todd described a case of a woman who had the transient sensation of being 'split' which was accompanied by the sensation of having a second head.
- Visual distortions: these occur in many different types, for instance seeing things as slanted or seeing an extra line or contour around objects, seeing things larger or smaller than they actually are (micropsia, macropsia), seeing movement that is not there (kinetopsia) and akinetopsia (the inability to see movement).
- Illusory feelings of levitation and time distortions: the sensation that one is floating in the air and illusory alterations in the sense of passage of time.

Perhaps the most frightening aspect of the syndrome is that it can make one doubt the most simple, fundamental things about reality, which we had been taking for granted since we were little and thought we could be sure of. This can also cause insecurities about one's personal identity.

The characteristic symptoms are usually subtle in nature, in the sense that they tend to affect only a minor aspect of a person's full perceptual experience. Sometimes the symptoms occur in conjunction with each other. But even when several symptoms are present, they tend to be experienced in the same sensory modality, for instance being all visual in nature.

AiW syndrome is different from hallucinations and illusions, because the symptoms are distortions of regular sense perceptions. What people perceive is something real,

something out there in the physical world, which, however, presents itself in a twisted, warped, and contorted manner.

Whether a common cause underlies all cases of AiW syndrome is unknown. Numerous medical conditions may trigger it, including epilepsy, migraine and substance abuse. However, the majority of patients suffering from such conditions do not develop the syndrome. Thus, perhaps, a special vulnerability is needed to promote it, even in the presence of such disorders.

For numerous other medical conditions, diagnostic criteria are available from scientific organisations. In addition these organisations may issue evidence-based guidelines which stipulate how disorders should preferably be treated. However, for AiW syndrome no such diagnostic criteria or therapeutic algorithms are available. This is because the syndrome has until now hardly been investigated. In an appendix Blom lists a proposal for the full diagnostic criteria to be used in clinical practice.

Although no hard data are available, there must be numerous people out there suffering from this virtually unexplored condition. What's more, the condition is so obscure that only a minority of medical specialists would recognize it. If it had not been for a few scientists who kept on publishing papers throughout the years, AiW syndrome would probably have been forgotten by the medical world. So what is needed in the first place is an increased awareness, enabling people suffering from AiW syndrome to find their way to trained specialists.

Alice's Adventures in Wonderland

For those familiar with *AAiW* it will be easy to recognize the symptoms as elements in the story. Here are some of the examples mentioned by Blom.

There are illusory feelings of levitation when Alice is falling down the rabbit hole so slowly that she has plenty of time to take a jar labelled 'Orange marmalade' from the shelf, and after inspection stow it away in a cupboard a little further down.

Alice also experiences somesthetic distortions, since she alters in size several times. She experiences hyperschemata in the scene where she grows so large that she gets stuck in the White Rabbit's house.

There is psychosomatic duality, since pretending to be two people was one of Alice's favourite pastimes.

Connected with Alice's sensation of feeling her body grow smaller and larger, is her perception of things appearing larger or smaller (macropsia and micropsia). But there are more varieties of visual distortions. Alice experiences prosopometamorphosis, the apparent change of faces into different ones, when she is confronted with the baby which turns into a pig. There is loss of her stereoscopic vision when the gardeners, shaped as playing cards, are seen as "oblong and flat" instead of three-dimensional objects.

There are many references to the subject of time, including time distortions, for instance when the Hatter refers to the speeding up of actual chronological time: "You'd only have to whisper a hint to Time and round goes the clock in a twinkling".

Alice experiences depersonalisation at the time when she remarks "I'm not myself you see." She has undergone so many changes during the day that she does not know who she is anymore.

How did Dodgson acquire knowledge about the symptoms?

On the basis of the descriptions in *AAiW*, Blom concludes that there is overwhelming evidence that Dodgson had intimate knowledge of a large number of symptoms that now are considered to be part of AiW syndrome.

But what might have inspired him to describe them? Had he perhaps heard about them from someone else? Or several individuals who had each given him a description of a few of those symptoms? Could it have been his nephew, Stuart Dodgson Collingwood, or Charles' own brother Skeffington Dodgson, who were both known to have suffered from epilepsy? Or could it have been Alice Liddell to whom he devoted the story? There is no indication whatsoever that Alice Liddell experienced perceptual distortions, let alone confided in Dodgson about them. The same holds true for the other persons mentioned.

This brings us to the next question: did Dodgson experience the perceptual symptoms he described in *AAiW* himself? Judging from what Dodgson himself wrote about the story's genesis, it did not seem to stem from a dream. He did indicate that the subconscious might have had something to do with it, by saying that many of the ideas for his book had come "of themselves". This suggests that he may have found a way to access the 'primary process' as psychoanalysts call this mode of thinking: the type of mental process that predates linguistic reasoning. It is considered more primitive in nature, in the sense that it is immediate, illogical and raw, and that it makes use of images, emotions, and loose associations rather than the carefully built concepts that we use when we express ourselves in language. It would seem that Dodgson was indeed capable of accessing that layer of consciousness. Therefore it is not far-fetched that some authors believe that he had been on psychotropic substances; the images he invokes throughout the story are reminiscent of LSD experiences. However, there is no evidence that he actually used it.

In order to arrive at a careful opinion on whether or not he experienced perceptual distortions himself, and, if so, what might be the underlying cause, Blom presents a detailed reconstruction and evaluation of Dodgson's health, displaying all that is known about his health, including minor conditions and injuries, on the basis of his diaries and letters and the ample biographical material that is available.

Dodgson's medical record

Some general data: length around 1.78m, weight of 65 kg, measured at the age of 50, body mass index of 20,5. Key ingredients are his habit of not smoking, his almost daily exercises, eating simple small meals, and preferably skipping midday meals or contenting himself with a glass of sherry and a biscuit. His death in 1898 at the age of 65 (a respectable age at the time) was probably due to pneumonia, following a sickbed that had started out as "a feverish cold of the bronchial type".

His medical history indicates there were plenty of ailments for him to deal with during his life.

- Hearing problem: he had been hard of hearing in the right ear from early childhood onwards. Exactly at what age it came about is unknown. At the age of 17 he contracted mumps and this is the most likely cause.
- Face blindness: his memory in life was nothing short of remarkable, except that he had a bad memory for faces. His attempts to deal with this social handicap led him to

employ unusual strategies, including attempts to memorize the faces of acquaintances from photographs.

- Speech impediment: he had a speech impediment which had been present from early childhood onwards, which caused him considerable trouble. The exact cause of his stuttering is unknown, although it is clear that genetics played an important role. Three of his siblings suffered from speech impediment, as did possibly all of his ten siblings to a greater or lesser degree.
- Infectious diseases: other assaults on his health stemmed from the numerous infectious diseases that held 19th century England in their grasp. During schooldays he suffered a serious delay with schoolwork because of pertussis. He also attracted the flu once a year (like all healthy Englishmen). He suffered from various other diseases throughout his life, for instance bladder infection, and inflammations affected his arms and legs. His diary entries indicate that he was regularly “not feeling well”.
- Injuries: throughout his life Dodgson sustained various injuries. He was bitten by a dachshund; he made an attempt at skating and fell, cutting open his forehead; he suffered from facial pains, called “neuralgia” by his nephew Stuart Dodgson Collingwood, and lower back pain, to which Dodgson referred as “lumbago”.
- Loss of consciousness: At the age of 59, he once hit his head and lost consciousness for an hour. It took him more than 10 months to get rid of the headaches. Dodgson himself believed it had been epilepsy, but there is reason for doubt. He himself related it to a prior incident at the age of 53, which left him with a headache for more than a week. So there are some indications that he may have experienced two so-called tonic-clonic seizures throughout his life, although definite proof is lacking.
- Migraine: Dodgson also thought to be suffering from migraine. The reason was that throughout his life he suffered from fortifications, or flickering scomata, as they are also called, in the visual field. It may also have been the case that he suffered from a negative spot in his visual field, due to a migraine without headache. In his diary he mentions “seeing moving fortifications” and with this term he can hardly have meant something other than geometric visual hallucination, which is characteristic of migraine. In all Dodgson reported five instances of migraine equivalents in seven years. In 1952, the American neurologist Caro Lippman saw reason to suggest that Dodgson had suffered from not only migraine but also accompanying aura phenomena, and that these experiences might well have acted as a source of inspiration for the peculiar perceptual distortions described in *AAiW*. Although possible, there is no confirmation in the diaries that he had ever experienced aura phenomena.

Dodgson used various medicines to treat or prevent medical problems. At least some medicines taken by him were homeopathic in nature. He possessed a modest library of medical books, as well as a set of bones, which he apparently used to teach himself some basic principles about the human body. He was so much into alternative medicine that he sought the acquaintance of various homeopaths, collected reference books on homeopathic and herbal remedies and gave some of his books away to family members and friends, sometimes along with a box of remedies.

What about evidence?

From the medical record Blom concludes that there is no direct evidence at all that Dodgson experienced perceptual distortions – neither before or after he wrote *AAiW*. So what about indirect evidence?

Since several interesting hypotheses have been offered in the past, Blom provides a re-examination of the existing evidence. And since so much has been said about Dodgson's mental health, Blom also takes the opportunity to deflate some myths.

To investigate the nature and cause of Dodgson's alleged perceptual distortions, some authors mobilized solid medical experience. Others have not always been quite so scrupulous. In his own time, a rumour already circulated that he had become mentally ill. He has been called depressed, suicidal, a paedophile, a migraineur, an insomniac, an epileptic, an alcoholic, a cocaine addict, a cannabis addict and a magic-mushroom addict, to mention just a few of the more common allegations on offer. Others have pointed at his use of dangerous substances such as arsenic (which he took in homeopathic dosages) and sulphurous acid (which was prescribed to him but he probably never used since he disagreed with his physician's diagnosis). Still others believe that he used LSD, which would have been truly remarkable, since this substance was developed half a century after his death.

There is no evidence for any of this. However, we cannot be entirely sure whether or not he was secretly addicted to alcohol. As a curator of the Common Room at Christ Church, where he resided, he had easy access to it. He had a habit of skipping midday meals, swapping them more than once for a glass of sherry and carrying a flask of his own preferred brand with him when he dined out. However, all sources indicate that he used alcohol in moderate quantities. Yet on the other hand, it is well known that alcoholics often successfully manage their drinking behaviour in accordance with their social and occupational schedules.

Concerning Dodgson's psychological profile, the first question is whether there are any indications for psychological or psychiatric conditions in his medical history that might justify the assumption that he experienced perceptual distortions himself.

Blom does not believe that there is sufficient evidence to substantiate the claim that Dodgson suffered from any type of major psychiatric disease. Dodgson seems to have mastered an unusual set of social skills and an unusual capacity of juggling those around in varying social contexts rather than having suffered from dissociative identity disorder ('dual personality'). He did, however, possess several obsessive and compulsive character traits: the way he dressed, cared for his teeth, prepared his tea, kept his diary, archived his letters and photographs and carefully listed the names of girls whom he had met. They sometimes even bordered on fetishism, considering the habit of photographing people, asking for their autographs and visiting cards and collecting tiny locks of hair from his child friends. Whether these collections also had a sexual connotation for him is impossible to know.

Talking about sexuality, Blom asks himself the question why this family-oriented, successful, marriageable man was never openly in a relationship. There is one single passage in his diaries where he ponders setting aside some money in case he might ever wish to get married. It cannot be ruled out with certainty that Dodgson had been a Don Juan in disguise. Still, in that case he must have been very skilled at hiding his frivolous escapades. Whereas the possibility of an active sex life – however unlikely - can

therefore not be totally dismissed, to make a case for asexuality may not be as desperate as it sounds. Asexuality is very rare in adults, but it is not unthinkable that Dodgson was devoid of any sex drive. This is another mystery that must go unsolved, although there is something more to be said.

He had suffered from the mumps at the age of 17. Prepubescent boys suffering from the mumps rarely go on to develop testicular complications, but in adult men it is the most common type of complication affecting about 5% to 37% of them. At the age of 17 Dodgson belonged to the group at risk of orchitis.

Loss of libido may be an additional consequence, as are impotence, the development of female breast tissue and a failure to develop male characteristics such as heavy muscles, body hair and low voice. We really do not know whether Dodgson had any female breast tissue, but as regards to the other consequences of mumps-related orchitis, they would seem to apply remarkably well in his case, including the high-pitched voice, the frailty, the soft facial features and the – possible – asexuality.

The chances that he had suffered from unusually low androgyn levels lie somewhere between 1% and 10% and the chances that he suffered from bilateral orchitis and thus from impotence and infertility lies in the range of 0,1% tot 1%.

Some authors have suggested that Dodgson may well have had a condition not yet envisaged during his time, called 'Asperger's syndrome', which perhaps can be understood best as 'autism light'. Although he had found a niche in life where he could flourish and end up with numerous social contacts, he remained an anachronism among the anachronisms that already populated Christ Church where he resided. But in contrast to the majority of people with diagnosed autism, he was very capable of putting himself in someone else's shoes, especially those of children.

If we were to conclude that the Asperger tag is indeed applicable as a retrospective diagnosis, Dodgson must have belonged to a high-functioning subgroup who knew the sweet and sour of this condition. Also asexuality, however rare, has been reported to be slightly more prevalent in the context of Asperger's syndrome.

What may have caused the perceptual distortions, as mentioned by several eminent authors, is migraine. He must have experienced at least five instances of migraine. But all his descriptions stem from the time after *AAiW* was written. What has remained a mystery is the reason why Dodgson consulted an oculist in 1856, six years before he started writing the book. It is only mentioned once in his diary, with no information about the reason of the visit.

Another major hypothesis, the one involving epilepsy, had been unlikely from the outset. It is now considered virtually impossible to prove epilepsy in the absence of positive findings of an EEG. This makes it impossible to establish with any certainty whether Dodgson really suffered an epileptic seizure or not. So however unlikely it currently seems, epilepsy remains a possibility.

And finally there was the endlessly recurring fever. If anything qualifies for having produced perceptual distortions, in Blom's opinion, this is it. Dodgson experienced infectious diseases on numerous occasions before he wrote *AAiW*.

All things considered

Due to Dodgson's fussiness with his diary it is hard to tell whether his medical history reconstructed here is in any way complete. We can nevertheless conclude that Dodgson must have been familiar with the perceptual distortions he described, or else he would not have been able to come up with 13 different examples of them. Moreover, it would seem unlikely that he had based these descriptions on hearsay. Although there is no direct evidence that he had experienced them himself, throughout his life he had suffered from various conditions that are now acknowledged as factors that may trigger AiW syndrome. The top position would be occupied by the many infectious diseases that he suffered from.

In second place comes migraine, but it is a distant second. The third place is for intoxications of whatever kind, with alcohol being the most likely substance, as well as the one most readily available. Trailing far behind in fourth place is epilepsy.

A fifth and last factor worth remembering is the earlier observation that Dodgson seemed to have found a way to tap into the deeper layers of his consciousness, thus gaining access to areas of his psyche that would otherwise have remained out of his reach.

And that is it. Blom concludes that on the basis of this evaluation everybody can weigh the evidence for him/herself and conclude whether or not there is sufficient reason to believe that Dodgson did indeed suffer from the syndrome.