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Last but not least

Prosopagnosia in biographies and autobiographies

Abstract. Prosopagnosia is a selective impairment of the visual learning and recognition of faces. The congenital type, which is not accompanied by detectable brain damage or malformation, was recently found to be far more common than previously known. Therefore, one should expect that at least a few biographies or autobiographies would reveal a prosopagnosia. In this paper we present an autobiography and a biography describing five cases of congenital prosopagnosia. These biographic descriptions of prosopagnosia add further evidence to the assumption that the congenital type of prosopagnosia is not a rare condition, and not as socially crippling as one might expect.

Prosopagnosia is defined as a selective impairment in the visual learning and recognition of faces. Until the late nineties of the twentieth century, prosopagnosia was thought to be a rare consequence of central nervous tissue damage to the right temporal lobe, both temporal lobes, or the right occipitotemporal junction. McConachie (1976) published the first and for a long time only known case of congenital (also called developmental) prosopagnosia. In this type, the face recognition deficit becomes apparent in early childhood and is not associated with any detectable brain damage or malformation. By 2001, fewer than 10 cases had been published worldwide (Behrmann and Avidan 2005; Galaburda and Duchaine 2003; Kress and Daum 2003). In the last few years, though, this picture changed. Duchaine and Nakayama (2004) stated that more than 150 persons with self-reported prosopagnosia contacted their group in Harvard in the 18 months since they published their web site. Our own group reported 38 persons with a hereditary congenital type of prosopagnosia in 7 pedigrees (Grüter et al, in press). In a survey, Kennerknecht and his coworkers (2006) found that 17 of 789 randomly selected students (2.5%) had congenital prosopagnosia. We would therefore expect the deficit to be mentioned in popular literature. In the only paper on this problem so far, the author raised the question whether the bad-humoured egg Humpty Dumpty in Lewis Carroll's novel *Through the looking-glass and what Alice found there* may be prosopagnosic (Larner 2004). He refers to the following dialogue about recognising people:

> "'The face is what one goes by, generally', Alice remarked in a thoughtful tone. 'That's just what I complain of', said Humpty Dumpty. 'Your face is the same as everybody has—the two eyes, so—' (marking their places in the air with his thumb) 'nose in the middle, mouth under. It's always the same. Now if you had the two eyes on the same side of the nose, for instance—or the mouth at the top—that would be *some* help'."

This may indeed refer to prosopagnosia, but may as well allude to the proverbial similarity of eggs. To an egg, Lewis Carroll may want to tell us, human faces would appear as similar as eggs do to a human being. In this paper we present five certain cases of prosopagnosia in two biographies.

The first one is Jane Goodall's autobiography *Reason for Hope* (Goodall and Berman 1999). Jane Goodall is among the most famous and most energetic primatologists and ethologists of our time. In the introduction to her autobiography she stated:

> "I suffer from an embarrassing, curiously humbling neurological condition called prosopagnosia, which, translated, means I have a problem in face recognition. I used to think, that it was due to some mental laziness, and I desperately tried to memorize the faces of people I met ..."

Memorising faces is indeed a very difficult task for prosopagnosics, no matter how hard they try. Jane Goodall continues:

> "Quite by chance, when talking to a friend, I found out that he suffered from the same problem. I could not believe it. Then I discovered that my own sister, Judy, knew similar embarrassment. Perhaps, others did also. I wrote to the well-known neurologist Dr. Oliver Sacks. Had he ever heard of such an unusual condition? Not only had he heard of it—he suffered from it himself. And his situation was far more extreme than mine."

Jane Goodall does not only suffer from congenital prosopagnosia herself, but personally knows three other affected people. She published her book in 1999, when less than 10 cases had been reported in the medical and psychological literature worldwide. Obviously, no prosopagnosia researcher bothered to read her book at that time.

The second biography doesn't explicitly mention the term *prosopagnosia*, because the biographer probably didn't know the condition (and the term). It is the biography of Robert Cecil. By his full name and titles he was called Robert Arthur Talbot Gascoyne-Cecil, 3rd Marquess of Salisbury, Earl of Salisbury, Viscount Cranborne, Baron Cecil of Essendon. He was born in 1830 at Hatfield House, the Cecil's family home. He went into politics early in life and became the leader of the Conservative Party in 1878. In 1885 he was elected Prime Minister of Britain. With two brief interruptions, he stayed in office until 1902. Shortly after, he withdrew from public life and died a year later. His grandson David Cecil, a historian and biographer by profession, included his grandfather's biography in his book *The Cecils of Hatfield House* (Cecil 1975).

He wrote about his grandfather:

> "He found it hard to recognize his fellow men, even his relations, if he met them in unexpected circumstances. Once, standing behind the throne at a Court ceremony, he noticed a young man smiling at him. 'Who is my young friend', he whispered to a neighbour. 'Your eldest son', the neighbour replied."

This anecdote illustrates a common embarrassing situation for prosopagnosics. They don't recognise their neighbours at the supermarket or have trouble to identify their children in a crowded playground. It should be noted, though, that the Marquess saw that the young man was looking at him and that he was smiling. Obviously, he interpreted the direction of his gaze and the emotional expression of his face correctly. His prosopagnosia did not seem to affect the processing of facial information like emotion or gaze. This has been reported in the medical literature for other cases of congenital prosopagnosia as well (Grüter et al, in print; Humphreys et al 2007; Kress and Daum 2003) . David Cecil continues:

> "He was also vague about people he did not know. Driving up from Hatfield station one evening he found himself in the company of a man who seemed to know him and whom he therefore took to be some unrecognised old acquaintance. Suddenly the man spoke. 'Lord Salisbury', he said in solemn tones, 'I am come to bring you a message from almighty god'. My grandfather said nothing, but on his arrival went to his study and, sitting down to work, summoned a manservant. 'I have left a madman in the front hall,' he said calmly, 'could you see that he is got rid of?', and returned to his papers."

It has indeed been reported that prosopagnosics of the congenital type frequently tend to be uncertain if they don't know people (Kennerknecht et al 2006), just as this fine anecdote illustrates. This could indicate that prosopagnosics either do not extract sufficient visual information from faces or cannot properly match the visual perception of a face with their mental image. As these examples show, prosopagnosics can make an exceptionally successful career in public life. All persons with a congenital prosopagnosia presented in scientific literature so far enjoyed a normal professional career. Though the condition is embarrassing, it is not necessarily socially crippling and still allows the affected persons to lead normal lives and to take up normal, or even

exceptional, professional careers. This might be part of the answer to the question, why the condition escaped the attention of neurologists and psychiatrists until very recently.

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