

# DOES SCHIZOAFFECTIVE DISORDER EXPLAIN THE MENTAL ILLNESSES OF ROBERT SCHUMANN AND VINCENT VAN GOGH?

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## SUMMARY

The geniuses Robert Schumann and Vincent Van Gogh show striking similarities both in the longitudinal nature of the progression of their illnesses, and the symptoms they experienced. There have been physiological explanations posed for both men, including Meniere's disease, tertiary syphilis, acute intermittent porphyria, terpenoid and lead poisoning, intracranial masses, temporal lobe epilepsy and dementia caused by vascular hypertension. The evidence for these physiological explanations is assessed. Schizophrenia and Bipolar disorder have also both been postulated to explain the symptoms of the two men, but neither man perfectly fits the diagnostic criteria for either. Schizoaffective disorder is a term used to describe patients who experience symptoms from both the psychosis of Schizophrenia and the mood disorders of Bipolar disorder. This paper aims to explain why Schizoaffective disorder explains the symptomology of these men better than either Schizophrenia or Bipolar disorder does alone. Schizoaffective disorder, however, did not exist as a diagnosis when Van Gogh and Schumann were alive, and so was not considered by their physicians.

**Key words:** schizophrenia - bipolar disorder - schizoaffective disorder - Robert Schumann - Vincent Van Gogh

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## INTRODUCTION

While many people know that Robert Schumann and Vincent Van Gogh suffered from a psychiatric disorder, it is difficult to detail the psychopathology of their illnesses as they died such a long time ago. The symptoms that the two famous men presented with show similarities. Many different diagnoses can be postulated for the two men. These include a disorder that falls within the 'Schizophrenia Spectrum' between Schizophrenia and Bipolar disorders: Schizoaffective disorder.

## MENTAL SYMPTOMS

The case is easily made that both Robert Schumann and Vincent Van Gogh suffered from Mental Health Symptoms.

### *Robert Schumann*

Robert Schumann (1810-1856) was a Romantic composer and music critic. He suffered from alternating depressed and elated moods from the ages of 18 to 38, when in 1848 his mental health went into decline. He attempted suicide and was voluntarily admitted to the Endenich asylum, where he died.

In addition to these melancholic depressive episodes, Schumann suffered from auditory hallucinations. These took the form of the note A, angelic voices and the voices of demons. He suffered from delusions of being poisoned, and of being threatened with metallic items (Domschke 2010).

### *Vincent Van Gogh*

Van Gogh (1853-1889) was a post-impressionist painter. He suffered from a similar longitudinal

progression of illness to Schumann in that, from birth to death, he experienced elated periods and depressed periods. In his elated periods he worked intensely at preaching early in his life, and later at his art. In his depressed periods, except for one period in the Saint-Remy asylum in 1889 where *Starry Night* was created, he did not produce any artwork.

Van Gogh suffered from fits with both visual and auditory hallucinations and delusions, again similarly to Schumann (Blumer 2002). Self-mutilation, including cutting off his ear, was a further psychiatric symptom. Subsequently he committed suicide.

## PHYSICAL SYMPTOMS AND EXPLANATIONS

It has, however, been suggested that in the case of both subjects, physical illnesses could be explanations for the reported symptoms. These could explain some of both the mental and additional physical symptoms.

### *Vincent Van Gogh*

A different explanation for the visual hallucinations described by Van Gogh's physician is that they are a manifestation of nystagmus. Another interpretation for the auditory hallucinations is tinnitus. As such, a potential retrospective diagnosis of Meniere's disease has been proposed (Kaufman Arenberg 1990).

Van Gogh presented with abdominal pain as described in his letters to his brother Theo. This has led to the suggestion of acute intermittent porphyria, a disorder of heme metabolism (Arnold 2004).

Van Gogh was said to eat his oil colours, which, as well as containing lead, contained turpentine. He took

camphor for his insomnia, as well as drinking absinthe, which contains thujone; camphor's structural isomer. These are all terpenoids. The convulsions that terpenoids induce are ameliorated by bromide, and in Arles bromide treatment helped Van Gogh (Arnold 2004). This provides evidence for terpenoid intoxication. Van Gogh's art showed a lot of yellow, for example the yellow coronas around each star in *Starry Night*. He could have simply liked yellow, or his physical state could have influenced his work and created xanthopsia (yellow halos). A first theory to explain this links the xanthopsia to terpenoid ingestion, as excessive consumption of terpenoids may lead to the consumer seeing all objects with a yellow hue. An investigation showed that a person must drink 182 litres to produce this visual effect, so this is an unlikely explanation.

Lead intoxication, as well as alcohol withdrawal and porphyrias amongst other things, can precipitate epilepsy. A further theory centres around Van Gogh having had temporal lobe epilepsy that was precipitated by the used of absinthe (Blumer 2002). Temporal lobe epilepsy is the most common cause of partial seizures. This could explain his hallucinations and the temporal pattern of his illness in discrete episodes. Evidence against this is that potassium bromide controlled Van Gogh's condition, and while potassium bromide is effective against grand mal seizures, absinthe intoxication, and acute intermittent porphyria, it is not effective against partial seizures. Furthermore, Van Gogh's episodes lasted much longer than the typical minutes-to-hours duration of partial seizures (Arnold 2004).

This links to a second theory for Van Gogh's potential xanthopsia, which is that he was overmedicated with digitalis. At the time, digitalis was a common treatment for epilepsy. Patients on large and repeated doses see world with a yellow-green hue, or yellow spots with coronas, much like in the starry night painting. Furthermore, Van Gogh painted 3 portraits of Gachet, his physician, who was depicted in one of these holding in his hand a stem of *Digitalis purpurea* (purple foxglove), from which digitalis the drug is extracted (Wolf 2001).

One further piece of evidence is that both a photograph of Van Gogh as an adolescent and later self-portraits suggest craniofacial asymmetry. This might suggest that Van Gogh might have suffered an early brain injury at birth, which could have lead to his suffering epilepsy.

### **Robert Schumann**

Schumann suffered from auditory symptoms. This could have, in fact, been tinnitus. The diagnosis of Meniere's disease can be discounted as Schumann never lost his hearing. The tinnitus, or hallucinations, are also compatible with the diagnosis of syphilis (Walker 1972).

Syphilis was very common in the time of Schumann. Tertiary syphilis can cause the development of general

paresis 10-25 years after first diagnosis. This involves paranoid persecutory psychosis or simple dementia, which is consistent with Schumann's later mental state (Walker 1972). There is debate as to whether the autopsy showed changes that are consistent with this. The prosector described brain atrophy, thickening of the meninges, and meninges adhering to the cortex, however it is not clear that this can be interpreted as significant (Janisch 1986). Furthermore, Schumann was painted several times in his final years, and he was said to have had large pupils. This could have been from loss of light reflex in Argyll Robertson pupil (Walker 1972). The treatment for syphilis at the time was Mercury, which could also explain some of his symptoms.

Schumann's autopsy mentions a 'gelatinous' intracranial mass (Janisch 1986) at the base of the brain. There is insufficient evidence to interpret what this mass was, but possibilities include a colloid cyst, cranio-pharyngioma or a chordoid meningioma. Both colloid cysts (Lawrence 2015) and meningiomas have been linked to mental health symptoms, the latter to auditory musical hallucinations (Scott 1979).

Another suggested diagnosis has been dementia due to vascular hypertensive disease, which consists of small strokes due to hypertension. There is no evidence for this. The quoted symptoms include 'giddy feelings', shortness of breath, and cardiac anxiety, which sound much more like common anxiety. Despite this, the diagnosis was made popular by Joseph Goebbels, the Nazi head of Propaganda. Goebbels was trying to promote Schumann's reputation over Mendelssohn's, who was Jewish. There existed however, in Nazi Germany, a law which mandated sterilization for anyone diagnosed with Schizophrenia or Bipolar disorder, so Goebbels promoted a non-psychiatric diagnosis to explain Schumann's illness. This idea then lingered in medical and musical discourse until as recently as the mid-1980s (Braunschweig 2010).

## **SCHIZOAFFECTIVE DISORDER**

### **Schizoaffective Disorder History**

Emil Kraepelin, in his 1899 book *Psychiatrie*, divided the complex spectrum of psychiatric conditions known as psychoses into two major classes, which were manic-depressive psychosis and dementia praecox. This is referred to as the Kraepelian dichotomy. He did not categorise patients which had symptoms of both, although he acknowledged that 'there are many overlaps in this area'.

Schizoaffective psychosis was introduced as a term by Jacob Kasanin in 1933 to describe episodic psychosis with affective symptoms.

In 1959 Kurt Schneider began to look at psychotic illnesses sequentially over a longitudinal course. This was the key observation needed to elucidate Schizoaffective disorder. He identified patients with a

sequential type illness, which was marked with alternating mood and psychotic episodes. He described Schizoaffective disorders as 'cases in between' the Kraepelian dichotomy.

In 1970 Kendell and Gourlay brought up the schizoaffective concept again by describing a trimodal distribution of symptoms in a large group of patients: those with schizophrenic type symptoms, those with bipolar symptoms, and those with a mixture of both (Kendell 1970). Sir Robin Murray described 3 groups of genes related to psychosis: one group linked to schizophrenia, another to Bipolar disorder, and a third with both conditions. With the onset of genome-wide association studies (GWAS), it became more evident that not even a trimodal distribution is sufficient, and that psychosis is not one illness, but many illnesses due to many combinations of genes (Craddock 2005).

In terms of symptoms, it is beyond the scope of this paper to describe all symptoms or subtypes. Reference is made to the international classification of diseases ICD10 (WHO 1994) and DSM-5 (American Psychiatric Association 2013). In general, however, Schizophrenia is a mental disorder characterized by abnormal social behaviour and failure to understand reality. Positive symptoms include false beliefs, referred to as delusions; unclear or confused thinking, manifested as various types of thought disorder; hallucinations of any modality, but especially including third party auditory hallucinations; and cognitive deficits. Negative symptoms include reduced social engagement and emotional expression, and a lack of motivation. Bipolar disorder, formerly known as Manic Depression, is a condition that affects mood, which can swing from one extreme to another. People with Bipolar disorder can have periods of depression, feeling very low and lethargic, or mania, feeling very high and overactive. Each episode of high or low mood can last for several weeks. At the highest degree of mania, as well as in deep depression, psychotic symptoms including hallucinations and delusions may occur. Schizoaffective disorder is a mental disorder diagnosed in patients who have features of both Schizophrenia and Bipolar disorder or depression, but who may or may not meet the diagnostic criteria for either alone.

## PSYCHIATRIC EXPLANATIONS

### *Vincent Van Gogh*

Another psychiatric explanation for Van Gogh's symptoms is borderline personality disorder. Van Gogh's brother Theo once sent a letter to his younger sister regarding Vincent, saying 'it seems as if he were two persons: one marvellously gifted, tender and refined, the other egotistic and hard hearted. They present themselves in turns, so that one hears him talk first in one way, then in the other, and always with arguments on both sides.' (Blumer 2002).

Bipolar disorder was also suggested frequently as Van Gogh suffered from reactive depression followed by euphoric periods. Evidence against pure Bipolar is the speed of onset and offset of the mood changes - Van Gogh's were rapid, while Bipolar patients seem to have more sustained mood changes. The nature of his cycloid psychosis has also been used to rule out pure schizophrenia due to the total recovery between episodes, as well as the amnesic confusion experienced after his attacks (Blumer 2002). Schizoaffective disorder combining the symptomology of both disorders could therefore fit the account of his symptoms.

### *Robert Schumann*

Mental health diagnoses clearly fit due to the adolescent onset, progression by fits and starts with periods of partial remission, symptoms of delusions, hallucinations, mood changes, and behavioural disorders. The psychotic symptoms of hallucinations and delusions discussed are more likely to be explained by schizophrenia than Bipolar if one were to analyse Schumann's symptoms using Kraepelin's dichotomy. Schizophrenia does not, however, fit alone, as the cycle of mood changes in his earlier years looks more like Bipolar disorder, which is primarily a mood disorder. An intermediate diagnosis of schizoaffective disorder thus could fit Schumann well. This does not necessarily exclude concomitant symptoms of physical diseases. In fact it has been suggested that the final illness, from the suicide attempt onwards, must have begun from a state of delirium, typical of acute psychosis but not schizoaffective disorder. This state could be explained by neurosyphilis.

## CONCLUSIONS

Both subjects could have potentially been diagnosed with Schizoaffective disorder if presenting now, but the concept was not present at the time and so this diagnosis could not be used. Schumann died in 1856, and Van Gogh in 1890, both before even dementia praecox was used as a term (1891), let alone Schizoaffective disorder (1933). If this diagnosis had been available, it may have been used, and it may then have turned out that some of the mental and physical diagnoses postulated were not good fits.

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### **Contribution of individual authors:**

Yasmeen Cooper carried out the literature search and drafted the text.

Mark Agius commented on and corrected the text and supervised the project.

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Vincent van Gogh. Hallucinations, including hearing voices, are a common symptom of schizophrenia. Some scholars say van Gogh's behaviors may have stemmed from that disorder. According to one account, van Gogh, during an argument with fellow painter Paul Gauguin, heard someone in his ear say, "Kill him." Instead, van Gogh took a knife and cut off part of his own ear. Some psychiatrists think he might have had depression or bipolar disorder instead. Swipe to advance. National Alliance on Mental Illness. "Schizophrenia." Blumer, D. American Journal of Psychiatry, April 2002. Vincent van Gogh (1853-1890), one of the most famous painters in the history of Western culture, continues to intrigue clinical and experimental neuroscientists who have looked at possible connections between events of his life, his mental illness, and his unique style. Born in Zundert, in the south of the Netherlands, the son of a Protestant minister, van Gogh was the first of 6 children. His two brothers, like Vincent, did not reach their 40th birthday while his three sisters lived to an old age with the youngest, Willemien, spending the latter half of her life in a psychiatric institution. Van Gogh's most direct and honest account of his psychoemotional turmoil comes from the letters to his brother Theo, originally published in 1937 as the hefty tome *Dear Theo: The Autobiography of Vincent van Gogh* and later excerpted in *My Life & Love Are One* (public library) - the same wonderful 1976 gem that gave us his thoughts on love, tracing the magic and melancholy of Vincent van Gogh. The title comes from a specific letter written during one of the painter's periods of respite from mental illness, in which he professes to his brother: "Life has become very dear to me, and I am very glad to see the geniuses Robert Schumann and Vincent Van Gogh show striking similarities both in the longitudinal nature of the progression of their illnesses, and the symptoms they experienced. There have been physiological explanations posed for both men, including Meniere's disease, tertiary syphilis, acute intermittent porphyria, terpenoid and lead poisoning, intracranial masses, temporal lobe epilepsy and dementia caused by vascular hypertension. This paper aims to explain why Schizoaffective disorder explains the symptomology of these men better than either Schizophrenia or Bipolar disorder does alone. Schizoaffective disorder, however, did not exist as a diagnosis when Van Gogh and Schumann were alive, and so was not considered by their physicians.