



Capgras Delusion in the Digital Age

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Case Report

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Abstract

We present a brief case report, referring to a 37-year-old female patient admitted to hospital due to a psychotic crisis. During her hospitalization, the patient revealed exuberant psychopathology, with the particularity of a phenomenon analogous to the classic Capgras syndrome. However, in her particular presentation, instead of reporting the replacement of people by look-alikes, the patient said that her contacts from a message application on her smartphone would have been replaced by fake contacts, such as digital look-alikes. The case reveals how classic psychopathological presentations can unfold in new guises, reflecting the socio-cultural changes of each period of time.

Keywords: Persecutory delusions; Hallucinations; Schizophrenia

Case Report

A 37-year-old woman was referred to Instituto Raul Soares, a psychiatric hospital in Belo Horizonte, Brazil, due to aggressive behavior, auditory hallucinations, soliloquies and negativism. Her illness had started two years before, with auditory hallucinations and persecutory delusions. Despite a good response with Haloperidol orally, treatment was discontinued a few months before referral, leading to worsening of symptoms. She received 50 mg of intramuscular Haloperidol decanoate 14 days before admission. Premorbid and general medical histories were unremarkable.

During hospitalization, she presented exuberant psychopathological features: auditory (voices arguing and commenting) and cenesthetic hallucinations, disturbances in ego-consciousness (unity, activity and ego-demarcation) and rich delusional production. She claimed that her family members were able to control her actions and emotional states using their feet or hands. She alleged that they had an "instruction manual" that would give access to her body and

head, allowing the control and steal of her thoughts. She felt "invisible threads" in her legs and around her mouth, which would manipulate her speech and steps. In addition, some people had the ability to miniaturize themselves, becoming "mini-people" capable of entering her head and "private parts" through small holes. Once inside her head, they would steal her thoughts and memories, and in her private parts, eat her feces and drink her urine. After leaving her body, the "mini-people" would become invisible "virtual people".

The patient revealed that she had been dating a very jealous man who would have convinced her to remove all passwords from her cell phone. This made it possible for her brother to access the phone and "change all her contacts". She claimed that he would have removed all contacts, replacing them with copies of the original ones, operated by impostors. She noticed that something was "different" when chatting in messaging apps with her contacts, e.g. her daughter. Even though the phone numbers and profile pictures were identical to the originals, the "letters" that composed the words in the text messages and the "voices" in the audio

messages were different, indicating that everything would be a scam. This discovery aroused feelings of anger towards her brother, leading to aggressive behavior and the consequent hospitalization.

Laboratory tests were normal. She was diagnosed with Schizophrenia and received the prescription of Haloperidol 7.5 mg/day, with progressive reduction of symptoms, but appearance of akathisia. Dose was reduced to 5 mg/day associated to Clonazepam 2 mg/day, with better control of extrapyramidal symptoms. After 17 days, she showed significant symptomatic improvement, being discharged to continue extra-hospital treatment.

Capgras delusion (CD) was firstly described in the 1920's by the French physician Joseph Capgras. In his seminal report, *L'illusion des "sosies" dans un délire systématisé chronique*, he described a woman who had been transforming everyone she knew into numerous doubles. In her words, doubles were "people who resemble each other" but were not the true ones [1]. Nowadays, CD is included in a group of disorders known as delusional misidentification syndromes, which are characterized by patients mistaking the identity of people they know, although they recognize them physically [2]. In the specific case of CD, there is a delusional conviction that someone-quite often a close friend or a relative-has been replaced by an identical or *quasi*-identical double [3]. It has been linked to varied conditions, such as schizophrenia, neurodegenerative diseases or organic mental disorders.

Why such phenomenon exists is a matter of debate. Capgras himself believed that his patient suffered from an emotional judgment impairment rather than a true sensory delusion [1]. For him, her delusion resulted from the struggle between feelings of strangeness and of familiarity [1]. Later on, this hypothesis was associated with prosopagnosia-the inability to recognize previously familiar faces [2]. The delusion would emerge from an intact primary ventral route to face recognition associated with damage within the secondary or dorsal route [2]. Consequently, patients would not be able to access a set of information with an affective tone that could confirm people's identity [2]. Nonetheless, these hypotheses do not seem to completely explain the disorder [3].

Schizophrenia has been closely related to CD [4]. According to the literature, 32 to 73% of CD cases had schizophrenia as an underlying diagnosis [4]. In general, schizophrenia spectrum disorders are by far the group of primary psychiatric disorders in which CD occurs most frequently, with paranoid schizophrenia standing out. Several mechanisms have been proposed as participants in the pathophysiology of schizophrenia, including the hypothesis of aberrant salience and the two-factor model

[5]. Theories concerning anomalies in salience or in abductive inference processes or linking CD to frontal and temporal lobes lesions have also been designed [2,3]. Thus, there would be a convergence between mechanisms proposed for schizophrenia and those currently suggested for the emergence of CD, according to which patients would experience perception with loss of affective familiarity and intact identification. It is this incompatibility between emotional and intellectual recognition that is supposed to give rise to delusional beliefs about the existence of impostors. Interestingly, structural neuroimaging has already indicated that patients with schizophrenia and CD have more widespread bilateral atrophy of the frontal and temporal cortex than patients with schizophrenia without CD [6].

In this report, we disclose the story of a patient who developed a phenomenon analogous to CD, with the particularity that the look-alikes or impostors referred to digital contacts in messaging apps. To the best of our knowledge, there are no similar reports in the literature. In addition to suggesting that the mechanisms underlying the delusional production in CD involve elements other than face recognition, this case reminds us how psychopathological presentations are plastic and dynamic, transforming and updating in relation to culture and the social environment, even in the case of classic syndromic descriptions.

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