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Contour Copying or Echoplasia – A New Echo Phenomenon in a Person with Gilles de la Tourette Syndrome

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Echo phenomena are environment-driven responses [1] occurring in different disorders, e.g. the Gilles de la Tourette syndrome (GTS) [2, 3], schizophrenic disorders [4, 5] including catatonia [6, 7], aphasias [8, 9], autism [10–12], epilepsy [13], frontotemporal dementia [14], Pick's disease [15] and neuropsychiatric systemic lupus erythematosus [16]. They are defined as pathological imitations of external stimuli. We report the case of a patient with GTS presenting a, to our knowledge, yet unpublished echo phenomenon.

A 43-year-old, right-handed father of a family was sent to our outpatient clinic by his general practitioner for having symptoms interpreted as characteristic of attention-deficit hyperactivity syndrome. During the exploration he spoke in a loud way and presented different facial tics. He also reported different single vocal tics, the naming of objects and echolalia. His father had similar symptoms, albeit more pronounced, as well as impulsive outbreaks. His 16-year-old daughter had minor symptoms of the same quality. Being asked for more phenomena similar to the echolalia, he reported that when seeing something impressive such as a big building, an attractive woman or a sports car he would draw the shape of the object with his right index finger, either in the air or on any surface within reach (e.g. on his own clothing). Whether he would

draw in the air or on an available surface (e.g. on his leg) depended on the position of his hand at the moment of perceiving the stimulus. Sometimes he would only trace the contours in his mind. Any premonitory urge was denied. If suppressed, a feeling of pressure, but not of fear, would occur.

Physical examination was normal. The patient refused any medication for the treatment of his tics, denying any psychological strain. The patient met the criteria for the diagnosis of GTS according to DSM-IV as well as to ICD-10. He neither fulfilled the criteria for a co-morbid obsessive-compulsive disorder nor for an attention-deficit hyperactivity syndrome.

Despite a considerable amount of literature on repetitive phenomena, the symptom reported here has, as far as we know, not been described and categorized before. There are some superficial similarities to obsessive-compulsive symptoms, yet the symptom presented by our patient does not belong to them. When obsessive acts are suppressed, apprehensions that something bad might happen occur frequently. These apprehensions do not occur in the case of tics [2]. In contrast to compulsions, neither the act itself nor its suppression causes any fear. Cath et al. [17] emphasize that symptoms in GTS, even when sharing superficial similarities with obsessive-compulsive symptoms,

should not be diagnosed automatically as obsessive compulsive. This can also be applied to the phenomenon reported here: unlike, for instance, obsessive drawing on a table cloth in an obsessive-compulsive disorder patient, our patient's tic occurs with an external model as a stimulus. In summary, the characteristics of this particular symptom correspond to the definition of an echo phenomenon.

Echo phenomena are classified as tics [18]. In GTS, echo phenomena are associated with illness duration and the severity of motor tics [3]. Echo phenomena reported in the literature are echolalia, the repetition of words, echokinesis or echopraxia, the reproduction of movements, echomimia, the reproduction of facial expressions, and echographia, the repetition of written [19] and spoken words [20]. Echo phenomena are named by merging the Greek word 'echo' and the word that describes the repeated action, e.g. echolalia consisting of 'echo' and 'lalein' (to speak). To distinguish this phenomenon from other echo phenomena we propose the terminus 'echoplasia'. Echoplasia is, in analogy to the terminology of the other echo phenomena, a compound word composed of 'echo' and 'plathein', the Greek word for 'to shape'. We suggest that this phenomenon should be added to the list of echo phenomena.

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