



The tokoloshe homunculus

To the Editor: The hippocampus is that part of the limbic system responsible for short-term and spatial memory. Increased activation of the hippocampus and related structures during seizures and REM sleep has been demonstrated in functional MRI (fMRI) studies. In fact, the hippocampus is particularly susceptible to electrical overstimulation and seizure sequelae. The dorsal extension of the hippocampus (the indusium griseum – also called the supracallosal gyrus) comprises two thin grey-matter strips that overlay the corpus callosum; it is a vestigial structure of unknown function in the postnatal brain.

A popular theory in neuroscience literature, proposed first by David Chamberlain¹ and later by Michael Persinger,² is that the indusium griseum plays a functional role in the developing fetus; it is viewed primarily as the embryonic equivalent of the adult hippocampus and secondarily as the sensory homunculus of the fetus. In the latter function, it has a somatotopic representation of the fetus equivalent to the adult postcentral gyrus representation of the adult form. This fact implies that stimulation of this vestigial structure could conceivably result in the visual or otherwise experience of the stored sensory homunculus of the fetus. The outcome would be visual hallucinations of a small humanoid with a large head, big eyes and a small body.

Various descriptions of visitations by tokoloshe-like small humanoids have been documented over the centuries; they are named differently by different cultures, e.g. cherubs, harpies, muses, incubi, succubi – and perhaps even Martians. Temporal lobe epileptics are known to have formed hallucinations that include a human form of varying sizes. It is likely that activation of the indusium griseum secondary to hippocampal stimulation, by moments of distress, dreaming or seizures, can result in a visual experience of small humanoid creatures of this type.

The tokoloshe (or tikoloshe or tikoloshi) in African mythology is a humanoid creature about 1 m tall, with a large head, big eyes and a slender torso. It is (allegedly) mostly nocturnal and friendly to children but can be harmful to adults if under the influence of evil witches. Raising one's bed by placing it on bricks (allegedly) offers some protection against



the tokoloshe (which is also now allegedly responsible for spreading HIV infection).³

It has often been argued that the search for answers to age-old conundrums cannot always be found in scientific study. Beliefs are just what they are and should be left alone. But this instance does beg the question: Could the tokoloshe be the experience of a stimulated indusium griseum? And do we here in Africa have a pre-programmed tokoloshe homunculus waiting to be activated in times of distress, dreamlike states or during a seizure? And lastly, but most challengingly, can a tokoloshe homunculus be imaged by fMRI during an episode?

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