

Thoughts on Thought

Hearing Voices: The Histories, Causes and Meanings of Auditory Verbal Hallucinations,
Simon McCarthy-Jones, Cambridge University Press, page 362

What is most problematic for the development of any inner speech account of auditory hallucinations is that we still know next to nothing about thought itself. Until we have some idea of the nature of thought and how the brain produces it, it remains very hard to assess how unusual manifestations of it result in auditory hallucinations. How can we know how thoughts relate to voices until we know what thinking itself is like? We have already seen how a traditional corollary discharge account views auditory hallucinations as resulting from *effference* copy signals from inner speech productions in left Broca's area not being communicated correctly to the left speech perception regions of the brain, but what other accounts may we consider?

A good starting place for a brief consideration of some of the issues here is the theory of Morton Prince, mentioned in Chapter 3. Prince proposed the idea that auditory hallucinations resulted from our main personality hearing the thought of a sub-personality. This account has a nagging sense of phenomenological resonance with Type 1 auditory hallucinations. For instance, recall from the Introduction that Aldous Huxley talked of strange psychological creatures leading an autonomous existence, and the individual within the context of Islam in Chapter 6 who talked of the 'creatures in our heads'. By locating the source of the voice in a separate cognitive centre, this would explain how voices can be autonomous from our normal stream of consciousness. However, such an account has many limitations. **An obvious problem is that it assumes that there is a core self, which many philosophers of mind would disagree with, instead arguing that there is simply a narrative centre of gravity (Dennett, 1991) which solders thoughts into a coherent but illusory sense of self.**

In such a model, thoughts are not produced by the self in the first place. Here we may return to argument from Chapter 9 that voices may be experienced as non-self produced because they (and indeed all thoughts) are non-self produced. Stephens & Graham (2000), drawing on Frankfurt's (2007) observation as noted earlier (Chapter 9), that some thoughts are not thought by us, but only found to be incurring in us, to conclude that we are just passive bystanders to some of our thoughts and that there are thoughts which are not ones 'we think at all, but rather thought which we find occurring in us' (p. 59, emphasis in original).

They conclude that the sense of mental agency for our thoughts comes from whether or not a person is convinced that such thoughts represent his intentional state (i.e. his own beliefs and desires). If we are alienated from thoughts, then auditory hallucinations result. What this account implies is that thoughts start off not being ours, and that we create mental agency for this by working them into ourselves at a later time. This can be tied into a Buddhist approach in which there are 'thoughts without a thinker' (Epstein, 1999). Indeed, a greater appreciation of Buddhist philosophy of mind may help voice-hearers cope better with their voices/thoughts, and indeed this forms the backbone of third-generation cognitive behavioural therapy in which mindfulness plays a central role (e.g. Chadwick, Taylor & Abba, 2005).

Consistent with this account, work with split-brain patients (in whom the corpus callosum which joins the two hemispheres of the brain together has been cut for medical reasons) has led to the proposal that we have an 'interpreter' module in our left hemisphere which is responsible for weaving together a coherent narrative and sense of self from the diverse events that happen to us (Gazzaniga & LeDoux, 1978). However, split-brain studies have also found that the two hemispheres of the brain are able to have different 'personalities', so to speak. For example, Gazzaniga & LeDoux (1978) report how the patient P.S. when asked what he would like to be, responded (via his left hemisphere which can generate speech) that he would like to be a draughtsman. However, although P.S.'s right hemisphere could not speak, it was able to give responses by spelling out answers using Scrabble tiles. When his right hemisphere was asked what it wanted to be, the answer given was 'automobile race', presumably meaning 'it' wanted to be a racing driver.

Here we start to move away from a position where all thoughts start off equal to a model where thoughts generated in specific regions of the brain may be less consistent with our centre of narrative gravity than others.

Locating the origin of voices in the speech productions of the homologue of Broca's area in the 'silent' right hemisphere (i.e. on the opposite side of the brain to our normal speech production area) is one way to operationalise Prince's theory. Such a model feels right, given that we want to acknowledge that voices come from within, and yet are still not part of 'us'. Sommer & Diederer (2009), building on their research

group's most recent large scale neuroimaging studies (reviewed in Chapter 8), which show right Broca's area activation during auditory hallucinations, have proposed voices to originate in the right hemisphere homologue of Broca's area. They also note some phenomenological accords between auditory hallucinations and the speech that can be created by the right hemisphere in patients with severe aphasia, which are often repetitive, simple, 'automatic speech' utterances, with little variation, which often consist of terms of abuse or swear words. However, whilst some auditory hallucinations have this phenomenology, not all do, and we may need to postulate that these right hemisphere automatic speech productions are able to become more complex over time (Nayani & David, 1996). However, the automatic speech idea is consistent with the form of many auditory hallucinations which are typically, as Bleuler noted (Chapter 3), short utterances (and not sermons by the voice) or take the form of a dialogue with the voice-hearer. Given that answers are often inherent in questions, it is fairly simple to understand how voices could be easily created in response to questions from the voice-hearer. Hence, this appears a promising account of auditory hallucinations. We could also tie this account into J. J. Gibson's (1977) concept of affordances noted in Chapter 9. Here the affordances of objects could potentially generate automatic speech in the right hemisphere (e.g. pick up the cup), which is experienced as an auditory hallucination.

This proposal could be empirically tested by seeing if objects with obvious affordances (e.g. cutlery) trigger auditory hallucinations in those with frequent auditory hallucinations more than objects which less clearly afford actions (e.g. a scrap of paper). However, even when we have offered an account of the non-self nature of auditory hallucinations, it still remains to be explained why the voice is experienced as that of another person with specific acoustic properties.

