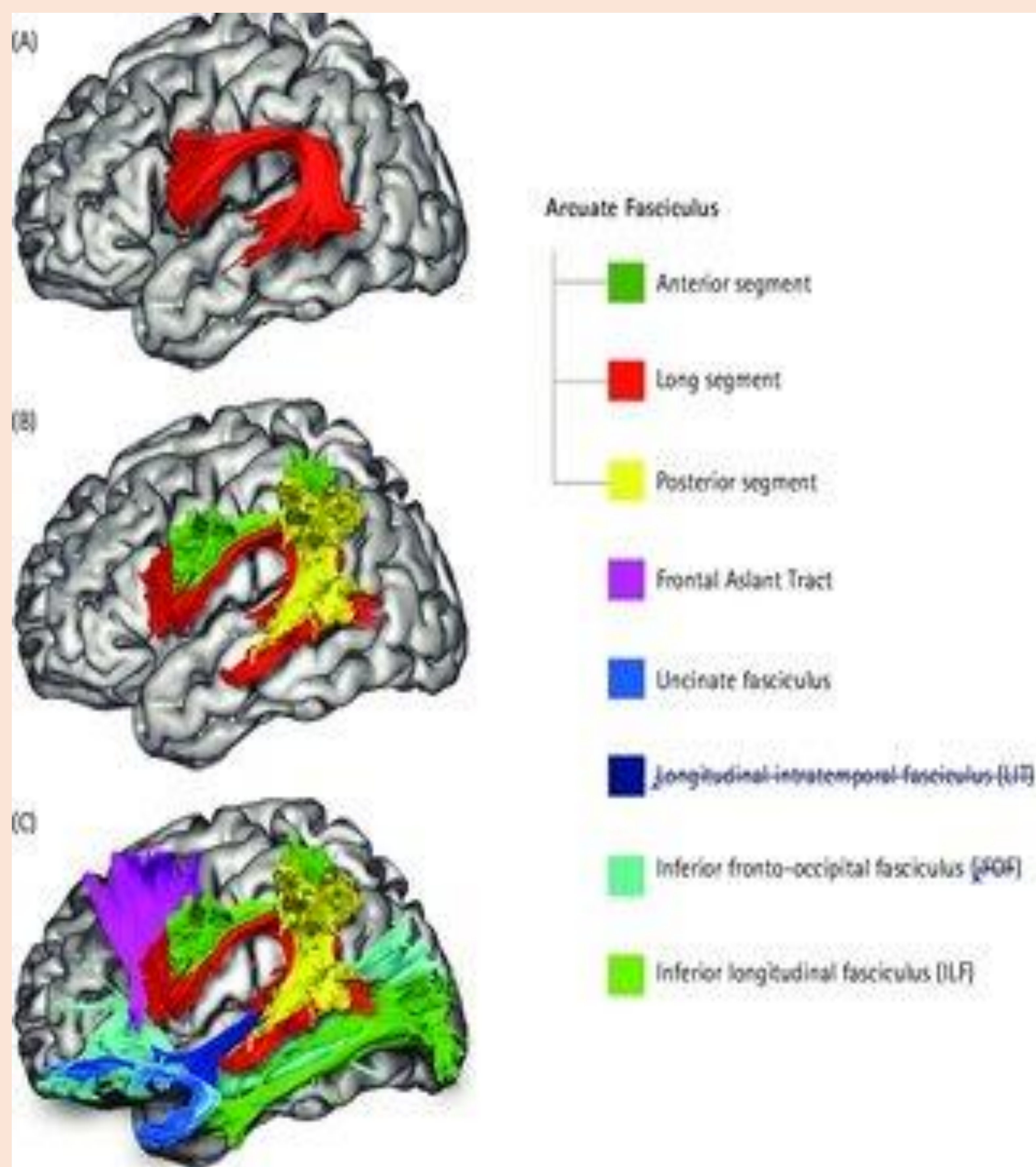


The Lateralisation of Language in the Brain: The Limitations of Current Literature

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The lateralisation of language to the left hemisphere in the majority of individuals who are right handed has thought to have been established, however, this arrangement does not currently have a widely accepted theoretical explanation. This may be due to the limitations of the field; although the left hemisphere is most commonly dominant, it is not a universal finding.

Anatomical studies examining brain regions that correlate to language lateralisation have shown mixed findings. Whilst several studies have shown a high prevalence of perisylvian white matter volumes with asymmetry concentrated on the left (indicating language networks as being a more likely anatomical substrate for lateralisation), there have been numerous studies indicating that leftward lateralisation of these regions (such as the temporal planus) is not correlated with language lateralisation. Thus, this analysis of the current literature aimed to identify the limitations associated with the study of lateralisation of the language networks within the brain through neuropsychiatric evidence and to further explore to what extent language function fits this set model of lateralisation to the left hemisphere.



Information gathered via diffusion imaging of the perisylvian matter/arcuate fasciculus:

Image from Forkel et al, 2010