First Sources - Relationship between Aphantasia and Embodied Cognition

PRIMARY SOURCES

1. **Dawes, A.J., Keogh, R., Andrillon, T. *et al.* A cognitive profile of multi-sensory imagery, memory and dreaming in aphantasia. *Sci Rep* 10, 10022 (2020).**

   This study took aphantasia, the lack of *visual* imagery in the mind, and also sought out to see if certain aphantasic participants were also affected in other sensory modalities. They found that there were decreased imagery in other sensory modalities, but not completely lacking (as is the case with extreme aphantasia cases).

2. **Ganczarek, Joanna & Żurawska-Żyła, Renata & Rolek, Aleksandra. (2020). "I remember things, but I can't picture them." What can a case of aphantasia tell us about imagery and memory?. Psychiatria i Psychologia Kliniczna. 20. 134-141.**

   This case study from 2020 discusses how imagery in the mind's eye may be different from memory in the case of aphantasia. In the study, they combined qualitative and quantitative methods in order to better understand and be able to distinguish between memory and imagery in the mind.

3. **Wilson, M. (2002). Six views of embodied cognition. Psychonomic Bulletin & Review, 9(4), 625–636.**

   This paper proposes that we should stop treating embodied cognition as a single static viewpoint, and instead embrace specific claims of it (such as the 6 views listed and elaborated on) in order to best understand what it really means.

4. **Gibbs, R. W., Jr., & Berg, E. A. (2002). Mental imagery and embodied activity. Journal of Mental Imagery, 26(1–2), 1–30.**

   Gibbs et al. present their evidence for embodied cognition.They foremost discuss the impact of subfields of linguistics on embodied cognition, but circle back to the effects on mental imagery / imagination.

5. **Takahashi, J., Saito, G., Omura, K., Yasunaga, D., Sugimura, S., Sakamoto, S., ... Gyoba, J. (2022, May 25). Diversity of aphantasia revealed by multiple assessments of the capability for multi-sensory imagery.**

   This study argues that the current visual criteria used for aphantasia diagnosis in research is not enough. Instead, we should be using diagnostic criteria that spans across

multiple sensory modalities in order to gain broader understanding of aphantasia and the diversity of the condition.

6. **Jacobs, C., Schwarzkopf, D. S., & Silvanto, J. (2018). Visual working memory performance in aphantasia. Cortex; a journal devoted to the study of the nervous system and behavior, 105, 61–73.**

   This original case study done by Jacobs and Schwarzkopf details how visual working memory is affected by aphantasia. They think that aphantasic individuals may have other, unconventional ways to compensate for visual imagery than non-aphantasic individuals.

7. **McNorgan, C.(2012). A meta-analytic review of multisensory imagery identifies the neural correlates of modality-specific and modality-general imagery. *Frontiers in human neuroscience*, *6*, 285.**

   This meta analysis paper by McNorgan aimed to investigate the neural correlates of multiple sensory modalities of mental imagery.

SECONDARY SOURCES

1. **Iachini, T. (2011). Mental imagery and embodied cognition: A multimodal approach. *Journal of Mental Imagery*, *35*(3-4), 1–66.**

   Iachini's article discussess the multiple models of cognition and how they correlate with embodied cognition. When discussing several models of cognitive theories, they talked about visual mental imagery and cognitive basis for it, and provides a clear segue into aphantasia from that models standpoint. This paper has extreme relevance to my work because of the discussions about aphantasia and how we can learn more about it from theories from the cognitive models such as the Neural model in tandem with embodied cognition.

2. **Palmiero, M., Piccardi, L., Giancola, M., Nori, R., D'Amico, S., & Olivetti Belardinelli, M. (2019). The format of mental imagery: from a critical review to an integrated embodied representation approach. *Cognitive Processing*.**

   This paper discusses and critically evaluates the embodied cognition approaches to mental imagery. The authors also bring in knowledge into these approaches about imagery ability and strategy within people.

3. **Adams, F. (2010). Embodied cognition. *Phenomenology and the Cognitive Sciences*, *9*(4), 619-628.**

Adams's article discusses the emperical evidence and conclusions we can make using embodied cognition, all the while providing some skeptical viewpoints of the theory. This will be helpful when I discuss the potential arguments against embodied cognition and how we can draw from its ideas to better understand aphantasia.

4. **Gallagher, S. (2011). Interpretations of embodied cognition.**

   This book chapter calls to attention the distinctive ideas of embodied cognition in detail. This will be useful in order to use the most pertinent ideas of embodied cognition in relation to mental imagery and aphantasia.

5. **Anderson, M. L. (2003). Embodied cognition: A field guide. *Artificial intelligence*, *149*(1), 91-130.**

   Anderson discusses the potential uses and limitations of embodied cognition for a wide range of research topics, including AI and evolutionary psychology. They also bring up many different perspectives on embodied cognition, which will be useful for my paper to explain to my reader why they should care.