Tips for reading Poldrack & Farah (2015), *Progress and challenges in probing the human brain*

After reading the paper, you should be able to answer and discuss the following questions:

What is the relationship between the methodological approaches we have available and understanding of the brain? How has that shaped our understanding of the brain historically and what characterizes contemporary view of the brain in human neuroscience?

What do the authors claim is necessary to fully understand human brain function?

According to the authors, what can we infer when psychological processes are experimentally manipulated by presenting a certain kind of stimulus and/or engaging the subject in a task?

What specific types of question can the use of MVPA and RSA address?

What role can computational modeling play in our understanding of the relationship between cognitive and brain functions?

What are some of the advantages and challenges to investigating functional connectivity through resting state fMRI?

*** To think about for discussion: When describing the use of MVPA and RSA the authors talk a lot about underlying mental representations. What exactly do they mean by that term and what empirical examples do they provide? For example, in non-human electrophysiology research, the term "representation" refers to specific changes in patterns of neuronal firing rate associated with an experimental manipulation. But what does it mean in relation to the interpretation of patterns of BOLD activation in fMRI?