

## Paper Assignment

Below are some *topics* for your short paper. I have posed a number of sub-questions within each that suggests how you might approach the paper. But, a paper is different from an answer to an exam question. In a paper you set the problem, frame a specific *thesis*, and address it. The topics are intended to focus you on a given thesis, but you must construct the thesis for which you will argue and organize your paper around it. Unless you get my approval for an alternative topic, your thesis should be broadly in the spirit of one of the prompts. Note, however, that you do not have to follow them slavishly. Your paper should include whatever is needed to defend your thesis—no more and no less. Don't assume your reader will figure out what you are doing and how the things you say fit together—make it clear. And remember that a title is your first opportunity to direct your reader's attention to what you are doing in the paper.

The overall evaluation of your paper will reflect both how ambitious your thesis is and how well you defend it. But be aware of the page limit—this is to be a short paper, 3-5 pages double-spaced (900 to 1500 words). Do not get so ambitious that you need 10-20 pages to do what you set out to do. Typically, you will be better off narrowing your thesis and developing your argument in detail rather than pursuing a very broad issue superficially.

Write your paper for an intelligent audience, but do not assume that they have been in this class or read what you have read. Therefore, you need to explain the relevant material to your audience, not just make allusions to it and assume they will understand.

You may ask others to read your paper and give feedback, but the writing is to be your own.

Submit your paper electronically to the following email address ([papers@mechanism.ucsd.edu](mailto:papers@mechanism.ucsd.edu)) in MS Word or .rtf format (NOT PDF). Please be sure that you do not have any computer viruses before submitting (I hope you don't have any other kind either). It is due by 5PM on Wednesday, 24 November (note, this is not a class day).

1. Does the analysis of networks advanced by Sporns provide a new perspective on the long-standing opposition of localizationists versus holists? Explain both has been meant by localizationism and holism, what are the strategies for developing network models of the brain, and crucial notions used to characterize networks such as community and hub. Defend your views as to whether network accounts help resolve the localizationist/holist debate, or whether, while adopting a network perspective, holists and localizationists can still argue for their position and against the other.
2. Critics of neuroscience often argue that it advances a misguided reductionistic explanation of human thought and action. In what sense is neuroscience research reductionistic? Make sure you are clear what you take reduction to involve (for example, deploying one of the accounts of reduction discussed in this course) and illustrate your discussion with an example of neuroscience research we have discussed this quarter. Based on your account of reduction and discussion of research in neuroscience, discuss whether you take reductionist research in neuroscience to be problematic.
3. Do processes in the brain function as representations (as, e.g., Marr maintains)? Examine how one of the opponents of representations we discussed (Chemero, Egan) makes the case for denying that the brain uses representations in performing its tasks. Show how they might respond to a particular neuroscientific account that seems to posit representations in the brain (e.g., edge detectors in vision or place cells in navigation). Does the antirepresentationalist you discuss make a compelling case for foregoing the claim that the brain operates with representations?