

Paper Assignment

Below are some *topics* for your short paper. A paper is different from an answer to an exam question. In a paper you set the problem and specific *thesis* and address it. The topics are intended to focus you on a given thesis, but you must construct the thesis and organize your paper around it. The thesis should be broadly in the spirit of one of the prompts, but you do not have to follow them slavishly. If you have a question as to whether your thesis drifts too far from the questions posed below, ask me. 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 and how well 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. That is, you need to explain the relevant material to your audience, not just make an allusion and assume they will understand. You may ask others to read your paper and give feedback, but the writing is to be your own.

If possible, please submit your paper electronically to the following email address (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). Otherwise, you may submit hardcopy to my mailbox. It is due by 7PM on Friday 6 March (note, this is not a class day). Also note that there will be no class on March 5—use the time to finalize your paper. I also will not have office hours that day, so if you need to meet with me, arrange a time before that.

1. Do bacteria or invertebrates process representations in generating behavior? Address this question by fixing on one of the conceptions of representation we discussed (or arguments against representations) and evaluate an example of a mechanism involved in an instance of bacterial or invertebrate behavior. Both explain the notion of representation you invoke and why it is interesting. Then be detailed about how it applies to the bacterial or invertebrate behavior you consider. Does the success or failure of applying the notion of representation to your chosen organism have any implications for thinking about the processing of representations in vertebrates, including humans?

2. Does research on bacterial or invertebrate behavior support or count against the possibility of a reductionistic explanation. Address this question by adopting one of the conceptions of reduction that we have considered and applying it to a particular instance of research on bacterial or invertebrate behavior. Make sure you explain in detail what reduction amounts to on chosen your account. Then describe the respect in which the bacterial or invertebrate research has been reduced (or not) to chemistry or neural activity. Does the success or failure of reduction in the case you have chosen have any implications for thinking about reduction in the case of human psychology?