

# Artificial Intelligence 1

## Essay Writing – How to . . .

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The following is a personal view of some ingredients of a good essay. Section 1 consists of general remarks about the form of an essay, and some tactics for reading and writing - all pretty obvious. Section 2 concerns more specific questions of content. Again, they are pretty obvious, but a number of past essays have fallen down on at least one of the points in the second section.

### 1 Form and Tactics

1. First, read the question carefully, and decide what it means. If you can't see what it means at first, have a preliminary scan through the reading, which should quickly reveal the meaning. If it doesn't, get some help. Chatting to someone else who is doing the same essay may help. Reading without a clear question in mind is almost always unproductive.
2. Next, give the set reading a fast and not necessarily exhaustive read. Then make a plan of your essay, deciding what it all adds up to and what order you should deal with the various subtopics. (Example: what connects the various features of autonomy, are they all addressing the same or different questions, what are they telling us and what order should they be dealt with in the essay?)

One tactic might be to decide what are the crucial questions that your essay should be answering (i.e. 'sub-questions' of the main essay question) and draw up your plan so that each section or paragraph answers one sub-question. The first time you try to do this for any given essay, you will probably find you can't. In that case, *don't* start writing the essay itself. Instead, go back to the reading a second time with these questions in mind. A very important part of this process is deciding *what to leave out*.

3. When you have made the plan, you should check that it actually constitutes an answer to the question you started off with. (Surprisingly often, it doesn't.) If not, go back to 2.

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\*marginally altered version of Mark Steedman's notes on essay writing

4. Essays should have a beginning, a middle and an end. The plan constructed in step 2 describes the middle, where the argument is developed. The beginning should be an introduction stating very briefly: a) what the problem is; and b) what the plan of the essay is, while the end should state some conclusion. You will probably write the conclusion and the introduction last, since your ideas will probably change somewhat during the writing of the middle. (Changing your mind about the plan in mid-essay may of course require some scissors-and-paste work, and/or rewriting. All this is a normal part of essay writing.) The sum of human happiness (i.e. that of the markers) will be greatly increased by avoiding introductions that begin “Since the dawn of time . . .”, or conclusions that end “. . . more research is needed in this area”.

## 2 Content

1. Essays usually require *comparing and contrasting* different theoretical positions, rather than merely stating them as alternatives.
2. All theoretical positions, concepts and terms should be explained when they are introduced. This explanation will almost always include an *example*.
3. The comparison and contrast of theories will always require the weighing of evidence. This may be experimental. Or it may depend on the behaviour of a program. Or it may be a philosophical contrast. In all cases, present the evidence in sufficient detail that a fellow student who had not read about it could see its relevance to the theory. But do not reproduce huge chunks of detail from the papers!
4. Remember that the point of evidence is to support or contradict a theory. The presentation of evidence should therefore be organised around the crucial concepts of the theory, rather than being an unorganised list of experiments or lists of ‘this is what the program did’.
5. Quotations should *only* be used under two very restricted conditions: a) when you are criticising, and your criticism hinges upon the precise form of words used by some author; b) when the quote is incredibly witty or wise (this is extremely rare). In either case, make sure you state who and where you are quoting from – otherwise you may be charged with plagiarism (a serious crime).
6. References should be included at the back of the essay. List the papers that you have used (and should have referred to in the text) with all the information needed for another reader to be able to find them. At the back of these papers you will find examples of papers that the authors have themselves referenced. Follow their example. In the text refer to the author and year. (e.g. “. . . the Shrdlu

program (Winograd, 1972) has been criticised for ... (Dresher and Hornstein, 1976”).)

7. Above all, the function of essays is: a) to help students to grapple with the material to a depth that mere reading does not make so necessary; and, b) to let course teachers see where each individual student’s problems lie. All of the above recommendations follow from this twofold function. Any essay that does those two things is a good one, whatever other rules it breaks.