CPSC 625-600 Paper Commentary: Instructions
Due: 12/3/07, in class

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1 Goals

The main purpose of this assignment is to expose you to recent literature on AI and related fields. Another major goal is to help you build the ability to actively understand, analyze, evaluate, and critique other people's ideas, not just passively absorb knowledge. Finally, this assignment will help you organize your thought and express your ideas in a coherent manner, through writing.

2 Selection of a Paper

Read the instructions in `http://courses.cs.tamu.edu/choe/420-reading/` if you want to select a paper on your own. Otherwise, select one from the following.

1. Fundamental issues (Bell 1999).

2. Behavior-based vs. information processing view of intelligence (Dean 1998).

3. Symbol grounding and natural semantics (Cohen and Beal 2000; Choe and Smith 2006).

4. Dynamical systems approach in cognitive science (Beer 2000).

5. Cognition and self-organization (Langlois and Garrouste 1997).

6. If you want to read something else, please obtain permission from the instructor.

3 Content of the Review

The paper review must address the factual content of the paper and your interpretation and critique. More specifically, it should contain all of the following aspects:

1. **A brief summary of the paper:** What is the main lesson/message/conclusion of the paper? (1 paragraph)

2. **Main contribution of the paper:** What is new about the approach taken in this paper (i.e. why is it distinct from other work)? and/or what are the new issues it raises compared to other (cited) related work? and/or what is new about the view presented in this paper? (1 paragraph)

3. **Limitations and future directions:** What are the limitations of the approach and what kind of issues need to be addressed in the future? (1 paragraph)

4. **Relevance:** How is the work different from (or similar to) the AI methods we studied throughout this semester? (1 paragraph)

All parts of the review should be in your own words: You should not use verbatim copy of the abstract or conclusion or any other part of the paper. The review should not exceed one, typed, single-spaced page.

4 Grading Criteria

The submitted reviews will be graded according to the following criteria:

1. **Clarity**: Is the review clearly written? (30%)

2. **Succinctness**: Is the review brief and to the point (i.e., no redundancy)? (10%) It should not contain unnecessary or redundant passages.

3. **Accuracy**: Does the review accurately represent the factual content of the paper? You should make sure that you understand the paper well, and when you say something about the paper, it should be factually correct. If the paper uses too many technical terms and you need help, please let me know. (25%)

4. **Depth and originality of the analysis**: Is the interpretation and analysis presented in the review insightful? Is the argumentation sound? (20%)

5. **Organization**: Is the review well organized? This does not mean pretty formatting using word processors. Organization is how the chunk of ideas are ordered and structured. (10%)

6. Remaining 5%: see below (Submission section).

Note that grammatical errors will *not* influence the grade unless they are severe. (This is not an English writing class.) However, typographical errors will, because it shows the lack of your attention to detail.

Also, be aware that your opinion can differ from mine, and that's fine as long as you present a reasonable argument. Simply reiterating what the author's view is does not automatically guarantee you a good grade.

5 Submission

The paper review is due by 12/03/07, in class.

For the paper review, you need to submit two things:

1. **Printout of an early draft, with your editorial corrections on it (written on the printout)**: You should carefully read the whole review at least once and revise it at least once based on your comments. After you revise, read it again to make sure you didn't introduce any further error. Your initial version with your own comments written on it will serve as an evidence that you did revised it at least once. This will account for 5% of the grade. **Note: Do not use MS Word's change tracking function as a substitute for this requirement.**

2. **Printout of the final version.**

Note that electronic submission **will not be accepted**.

6   Reviewing Tips

If you are not sure what is a good review, take a look at this book review by Cosma Shalizi:

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http://cscs.umich.edu/~crshalizi/reviews/how-the-mind-works/
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7   Extra Credit Information

You may submit one extra review, for 4% extra credit toward your final grade. That makes it a maximum of two reviews.

References

Beer, R. D. (2000). Dynamical approaches to cognitive science. *Trends in Cognitive Sciences*, 4:91–99.

Bell, A. J. (1999). Levels and loops: The future of artificial intelligence and neuroscience. *Philosophical Transactions of the Royal Society of London*, 354:2013–2020.

Choe, Y., and Smith, N. H. (2006). Motion-based autonomous grounding: Inferring external world properties from internal sensory states alone. In Gil, Y., and Mooney, R., editors, *Proceedings of the 21st National Conference on Artificial Intelligence*. 936–941.

Cohen, P. R., and Beal, C. R. (2000). Natural semantics for a mobile robot. Technical Report 00-59, University of Massachusettes, Department of Computer Science.

Dean, J. (1998). Animats and what they can tell us. *Trends in Cognitive Sciences*, 2:60–67.

Langlois, R., and Garrouste, R. (1997). Cognition, redundancy, and learning in organizations. *Economics of Innovation and New Technology*, 4:287–299.