The goal of a N&V paper is to critically evaluate & explain the contributions of one specific Target Article (TA). Your readers can then decide whether reading the original target article would be useful for them. Your target readers are your classmates: scientifically literate people without detailed knowledge about the specific topic in your target article. Your paper should be useful and interesting to your classmates (and me). If your classmates, roommates and perhaps even your parents do not find your paper interesting and understandable, then it is not reaching the intended target audience. Have a roommate/classmate/parent read an early draft and tell you what they learned. If it isn’t what you intended, get back to work!

The TA must be an original research report published in a peer-reviewed scientific journal within the last two years, focused on some aspect of organismal biology. An original research report will have Methods, new Results not previously published, and Conclusions about the implications of the new Results. Review papers are not acceptable. Papers focused entirely on molecular biology, or technical methodology, without sufficient organismal biology are not suitable. If there has already been a News-and-Views-style review published in a journal, the paper is not suitable for your TA (your assignment has already been done by a professional). Be sure to introduce and cite your TA properly the first time you refer to it. For this class, you should not do a literature review. Focus on your one TA, using its introduction to help you set the stage on the state of affairs (conventional wisdom or nagging problem) before the TA (the text and lectures might also be helpful for some subjects). Keep in mind that this N&V is a paper about a paper (the TA), aimed at a target audience similar to your classmates. You need to convince readers that they want to read your N&V analysis because they will learn interesting and useful things if they do. In the real world, readers can decide to skip your paper and read something more interesting instead.

(scoring rubric) Goals

(2 pts) Does the Title catch the reader’s interest as well as hint at the general content of the paper? The Title needs to be intriguing. It can be a little bit cute but not too cute to be effective.

(3 pts) A brief, 1-3 sentence pseudo-Abstract previews the general issue or problem and attempts to draw the reader in further by hinting at what they’ll learn if they choose to read the rest of your N&V paper. You are still trying to “hook” potential readers.

(1 pts) The Target Article is introduced and cited properly the first time it is referenced. The citation is listed properly at the end of the paper. You can use any proper scientific citation style, including the style used by your Target Article. Avoid footnotes.

(6 Pts) The first paragraph serves as a true Abstract and previews the entire paper superficially: What was the state of affairs before the TA and the general problem addressed by the TA? Specifically, what questions are being asked and hypotheses tested by the target article? Why are these important questions? What is the “bottom line” on how the target article is going to advance our understanding, solve a problem, change the way we do things and set the stage for further progress? This may or may not correspond to what the authors assert, depending on the validity of their methods, logic and conclusions – you need to critically evaluate this and make your own judgments. By this point you have to have “set the hook” and “made the sale,” otherwise the reader will set it aside and read some other more interesting article!
The next few paragraphs summarize the state of affairs before the target article. This shouldn’t be just lots of true facts. You have to use pertinent information carefully to effectively set the stage for what follows. If your TA is well written, you can get all the information you need for this from the Introduction of the TA. A look at Wikipedia or similar sources is OK, but I’ll discourage you from doing a literature review and citing a lot of other papers. I want you to spend your time thinking, analyzing what you learn from the TA and synthesizing your perspective, not digging through the literature to find facts to piece together.

The next few paragraphs give an overview of what the authors of the TA did, the logic for setting up the study, their specific hypotheses, their methods for testing their hypotheses, their results and conclusions. Don’t just repeat what the authors said – distill the essence of each section into language appropriate for a News7Views analysis aimed at your classmates. You should critically evaluate all of these, but in most cases it is best to hold criticism till later, when you take up the issue of what needs to be done next. Avoid filling space with irrelevant details; focus on things that are essential for understanding the strengths and weaknesses of the TA. If you encounter arcane methods and statistics, just do your best to understand them, acknowledge your limitations and trust the authors provisionally ("The statistics were beyond me, but they are conventional and if they were done correctly then …")

The final few paragraphs give your evaluation of the strengths and weakness of the TA. Are the authors’ conclusions sound? – why or why not? Do you come to different conclusions? – if so what are they? Think carefully about whether there are alternative hypotheses that are equally compatible with the results. What needs to be done next? If the TA is perfect, then use it as a stepping stone to the next big question. If you think the TA had some methodological shortcomings, propose a better way to do the study next time.

Your ability to do all of this effectively will depend on your writing skills. This is not primarily a writing class, but it does provide an opportunity for practice with some coaching. I will not score your writing skills separately from the story you are trying to tell. However, if you have good ideas in your head but can’t communicate them effectively because of weak writing skills, your scores will suffer at every turn. I will simply provide the following evaluation: My evaluation of the extent to which poor writing skills obscured potentially good ideas and reduced scores in the sections above:

You can get help with your writing at MSU’s Writing Center: http://writing.msu.edu/
There is a nice little paper on scientific writing that you can search out at several places on the www: The Science of Scientific Writing
The subtitle is very important:
If the reader is to grasp what the writer means,
the writer must understand what the reader needs.
This subtitle suggests where you should go first for help with your writing – a reader! After you have polished your working draft a bit, ask a classmate or roommate, or friend to read it and tell you if it effectively told them something interesting and maybe even important. Then polish it some more and bring it to our scheduled “walk-in clinic.” Please be aware that I will have very little time available per student; I can tell you whether you are on the right track, but beyond that, my editorial advice will be very superficial.