Professor Heather Haveman: How to Develop Arguments and Convince Readers

Here is a list of important dos (and don'ts) for theory development – and for scholarly writing in general.

Rhetoric and Logic

1) Provide clear **definitions** of the dependent variables (DVs) and the independent variables (IVs). These definitions should be conceptual – abstract descriptions. You might provide concrete examples to illustrate and clarify, and to distinguish your constructs from similar constructs.

Sociologists have long avoided clear definitions of constructs, as this lamentation from Alvin Gouldner (1957 *ASQ*, n. 4, p. 284) indicates: "The terminological disparities with respect to the definition of 'status' barely fall short of being appalling… [lists 7 definitions] That these varying defini-tions are not necessarily contradictory is small consolation and certainly no guarantee that they all refer to the same things. Nowhere do these definitions become more opaque than when – as they frequently do – they refer to a status as a 'position' in something. The ready familiarity of the word position seems to induce paralysis of the analytic nerve. Needless to say such terminological confusion begets efforts at neologistic clarification which may then only further becloud the field."

2) **Motivate** your choice of DVs and IVs. Why should anyone besides you care about what you're studying? Why should anyone else be interested in your particular explanation of the DVs, in your choice of IVs? Caring involves both **theoretical** and **substantive** interest.

Motivating your study requires that you identify potential audience members and figure out what they don't know, what gaps they know exist in our knowledge, what puzzles they find interesting. It helps to make your audience concrete, for example, by targeting two or three people whom you hope would be interested in your research project.

3) Provide a clear, logical **explanation** of why (how, under what conditions) an IV affects a DV. This is what is most often missing – a detailed series of "if, then" statements that leads from statements/claims about relationships between 2 or more concepts (these need not be empirically observable) to statements/predictions about relationships between 2 (sometimes 3) empirically observable concepts.

The goal should be argument (a combination of logic and empirical evidence that will convince even the most skeptical reader) rather than assertion (claims made without supporting logic or empirical evidence).

In building your explanation, you should think about all possible counter-arguments that skeptics could make – the opposing hypotheses they might put forward. Counter-arguments come in four generic forms:

i) The **direction of causality** is wrong; what you believe is the cause is actually the outcome.

ii) The effect has a **different functional form** than you predict; *e.g.*, negative instead of positive or U-shaped instead of monotonically positive, negative, or inverted-U-shaped. Or the effect may be **contingent** on some other factor – a moderator variable.

iii) Your prediction is **spurious** and any observed relationship between IV and DV is due to some other factor.

iv) Your prediction is **obvious**. There's no reason (*a priori*, before examining your logic) to believe that the IV wouldn't affect the DV, so there's no excitement in your study – no tension in the minds of readers as they follow your narrative.

4) To invoke extant theory, you must provide citations. Therefore, you need to conduct a careful, up-to-date **literature review**. But this does **not** mean that you should have a section in a paper or a chapter in a dissertation titled "literature review." Instead, you should tell readers a story, based on/supported by previous theory and empirical work, that builds toward your hypotheses.

When you describe published studies, you must choose carefully; select only studies that are well designed and entirely relevant to your own research question and empirical site. You simply cannot believe everything that is published – instead, you must read critically. You must also analyze the literature deeply – go beyond surface generalities (type of organization, aspect of structure or behavior, set of IVs studied) to probe the core ideas and critique the central findings. Finally, your readings must be up to date.

5) Your theory must be **coherent** – its components must hang together logically. If you have more than one DV or more than one IV, you must explain how they are **related**. Theoretical coherence prevents readers (especially this reader) from perceiving your theory-development effort as a messy, unparsimonious approach.

i) If you have one DV and several IVs, your choice of IVs should derive from theory – from our understanding of the nature, genesis, and functioning of the DV.

ii) If you have several DVs, your choice of them should also derive from theory – in this case, from our understanding of the deep connections between DVs, of the commonalities inherent in the phenomena you are studying.

6) **Offer formal statements of hypotheses** – predictions of what an IV (X) does to a DV (Y) – and set them out from the rest of the text (indent .5" on both sides, single-space, number hypotheses). This makes it easier to see what you're trying to predict. All good (testable) hypotheses share three characteristics:

i) They are **explicitly comparative**. Most hypotheses take the form of:
"the more of X, the more [less] of Y," or
"when X is large, Y is large [small]," or
"when X is present, Y is large [small or present or absent]," or
"as X increases, Y first increases then decreases, or

"as X increases up to some threshold, Y remains constant, but as X increases beyond that threshold, Y increases."
As you can see, all these statements compare values of X and Y at different levels.

ii) They involve only **a single set of relationships**. This usually means that they involve only 2 variables. But some types of hypotheses involve 3 variables:
a) mediating effects (X → Z → Y),
b) moderating effects (the effect of X on Y depends on the value of Z), and
c) spurious causation (X may appear to cause Y, but in actuality, Z causes both X and Y). These all involve 3 variables, but they still involve only a single set of relationships.

iii) They do not predict null effects – no relationship between IV and DV. Null results could be due to mismeasurement of constructs (bad translation of theoretical concepts into operational, empirically observable variables) or to misspecification of statistical models, rather than to the "truth" of your theory/argument.

7) Do not substitute measures for explanations or definitions. Your theory-development section is no place for measures, deep descriptions of research sites, or discussions of sampling plans. You should develop your theory and present your hypotheses before you introduce your research site and explain how theoretical constructs will be measured.

There are two exceptions to this rule of "theory first, research site second."

i) You need to describe your research site before delving into theory when the research site (and therefore some aspect of the outcome of interest and/or the explanation) is likely to be unfamiliar to your target audience; *e.g.*, the Chinese stock market or copyright law in nineteenth-century America.

ii) You need to describe your research site before delving into theory when your theory-development effort is limited to that particular research site and your theory is not intended to be generally applicable beyond that site; *e.g.*, large corporations in the US after WW II. In this case, an appreciation of the phenomenon is very closely related to an appreciation of the research site.

The Importance of Style

Your writing style greatly affects how readers understand and accept the substance of your research papers. So style is not simply a matter of readers (this reader) being picky. It's a critical rhetorical tool that you need to master.

Before you start to write, read Daryl Bem's "Writing the empirical journal article," which is available on his web site at http://dbem.ws/online_pubs.html#writing. And do buy William Zinsser's *On Writing Well* (30th Anniversary Edition, 2000) – it's well worth its $15 price tag.

8) **Use a standard format**. Readers respond negatively to your ideas if they appear in a weird format. Provide page numbers. Double-space your writing, which makes it easier for me to write comments in-between lines, and to help edit your writing. Indent the first line in each paragraph 0.5" – a standard format in American social-science writing. Do not leave an extra line between paragraphs – that's a waste of space. Spell out all numbers less than ten, and all numbers that appear at the beginning of a sentence (or rearrange the sentence so that the numbers are not at the beginning).

   Put all **tables and figures** at the back, after the references list. In the body of the text, insert a note – e.g., [Table 1 about here] – centered in the middle of the page right after the first paragraph referring to the table/figure. Each table/figure must be accompanied by an explanatory note that is complete – readers should not have to go back and forth between body of text and table/figure to understand it.

9) **Eschew passive voice.** Instead, write all sentences in **active voice.** This forces you to identify as specifically as possible who did what to whom, when and why. This, in turn, makes it more likely that your theory-in-development will have real "agents" – real individuals, groups, or organizations that have power to make things happen.

10) **Write short declarative sentences**. It's fine to have some long sentences, containing multiple subordinate clauses, but it's easier to understand shorter sentences.

    C. Wright Mills gave a marvelous example of how to revise long-winded, convoluted sentences to make their meaning clearer. In the second chapter of *The Sociological Imagination* ("Grand Theory"), he translated some statements by Talcott Parsons to simpler, shorter, and clearer statements. You'll be amazed at how much can be cut without sacrificing information – indeed, cutting often improves your ability to communicate.

    After mastering sentences, you must then figure out how to arrange sentences into paragraphs. Just remember that each paragraph should lay out a complete thought, or discuss a single idea. (If a paragraph gets longer than 2/3 of a page, double-spaced, you might consider dividing it into two parts.)

11) Provide a list of the works you cite – a **references** section – at the end of the paper. Double-check to make sure that all references are there, and that each reference provides complete information on the cited work. (Missing references is an indicator of sloppy work.) I don't care what reference format you use – just be consistent.

    Give page numbers for all quotations and for paraphrased remarks. Also give page numbers for ideas or findings from books where the cited material is found in only one section of the book, rather than being a general theme.

12) **Quote sparingly, if at all**. It's alright to quote some pithy statement, but don't rely on quotations for all your theoretical heavy lifting. Excessive use of quotations (more than one or two in a paper?) indicates

lazy scholarship: it suggests that you're too intellectually lethargic to find your own way of explaining your arguments.

13) **Eschew acronyms**. Using acronyms makes your ideas seem trivial. And using acronyms leads you, insidiously, to reify the phenomenon associated with it and, in doing so, to over-simplify the phenomenon.

    It's alright to use acronyms for common terms, but **only** if you're going to repeat the term many times in the course of writing your paper. What is a common term? A good example is a term that everyone who knows even a little about the phenomenon refers to by its acronym, like CEO for Chief Executive Officer, NGO for Non-Governmental Organization, or USSR for the Union of Soviet Socialist Republics. Even if you're using a common acronym, you must define it the first time you use it.

14) **Minimize the use of footnotes**. They distract readers from the flow of your ideas.

15) **Print out and read over your paper** before giving it to anyone to read to make sure that **spelling, grammar, and syntax** are correct. Errors in these domains undermine your credibility as a scholar – especially when you misspell the names of authors who may be your reviewers! All word-processing programs can check spelling. Use them, but don't depend on them alone, as they cannot distinguish between homonyms. And all word-processing programs have grammar-checkers. I personally hate them, but you may find them useful.

    The biggest grammatical and syntactical problems I encounter are the following:
    i) unclear antecedents to pronouns – who is "they" or "it"?
    ii) use of verbs that the nouns associated with them simply cannot do – how can a theory "argue"? how can a concept "illustrate"?
    iii) nominalization – turning verbs into nouns (e.g., the creation of rather than creating), which this makes your prose awkward and long-winded
    iv) creating new verbs from nouns that were created from verbs (e.g., to incentivize – definitely NOT a word; use *motivate* instead)
    v) problems with noun-verb agreement (plural *vs.* singular)
    vi) the tendency, within a sentence or paragraph, to switch between discussing a single actor and multiple actors (e.g., an organization ↔ organizations). It's usually easier to discuss multiple actors, since you're usually developing central-tendency arguments.

    If you are a non-native speaker, you may want to take a course on writing (look into Berkeley's College Writing Program at http://writing.berkeley.edu/) or have a native speaker check your work. You should also check out Berkeley's Student Learning Center (http://slc.berkeley.edu/writing/writing_resources.htm), which offers help for non-native speakers.

Coda: Inspirational Quotations

How NOT to write (1): "To be, or the contrary? Whether the former or the latter be preferable would seem to admit of some difference of opinion; the answer in the present case being of an affirmative or of a negative character according as to whether one elects on the one hand to mentally suffer the disfavour of fortune, albeit in an extreme degree, or on the other to boldly envisage adverse conditions in the prospect of eventually bringing them to a conclusion. The condition of sleep is similar to, if not indistinguishable from, that of death; and with the addition of finality the former might be considered identical with the latter: so that in this connection it might be argued with regard to sleep that, could the addition be effected, a termination would be put to the endurance of a multiplicity of inconveniences, not to mention a number of downright evils incidental to our fallen humanity, and thus a consummation achieved of a most gratifying nature." (Sir Arthur Quiller-Couch's translation of Hamlet's "To be or not to be" soliloquy into bureaucratese, *On the Art of Writing*, 1916)

How NOT to write (2): "*It was a dark and stormy night;* the rain fell in torrents – except at occasional intervals, when it was checked by a violent gust of wind which swept up the streets (for it is in London that our scene lies), rattling along the housetops, and fiercely agitating the scanty flame of the lamps that struggled against the darkness." (Edward George Bulwer-Lytton, *Paul Clifford*, 1830)

Demonstrating that there is hope for every writer: "Beneath the rule of men entirely great, The pen is mightier than the sword." (Edward George Bulwer-Lytton, *Richelieu*, 1839)

On the value of brevity: "I have made this longer, because I have not had the time to make it shorter." (Blaise Pascal, 1623-1662, "*Lettres provinciales*," letter 16, 1657)

A beautiful opening paragraph: "Let me introduce myself. I am an agent. The editors of the *Annual Review of Sociology* delegated to me the task of writing an essay on agency theory. They are the principals and together we are bound in a principal-agent relationship. They have a principal-agent relationship with you (the readers) as well. They are your agents and so am I, although not every agency theorist would agree with my loose conceptualization of your role in this, and few would be interested in you at all (though I am)."

Source: Shapiro, Susan P. 2005. Agency theory. *Annual Review of Sociology*, 31: 263-284. (For more inspiration, see the abstract.)

A beautiful start to a dissertation:

"There are no new complaints about the pharmaceutical industry. In the 1840s people worried that drugs were too expensive, by 1900 newspapers warned that the era of innovation was over, by 1930 Congress felt compelled to hold hearings over the price of drugs, and by 1950 they thought mergers had left the industry too concentrated. Despite their fevered pitch and hints of impending doom, every single fear raised in 2010 about the plight or dangers of the pharmaceutical industry echoes verbatim the words of someone speaking as much as a century earlier. This unending litany of complaints can be distilled to one irrevocable fact: No one likes the market for prescription drugs in the United States, and no one ever has. This raises the question my dissertation seeks to answer: Why do we have the market for prescription drugs we have today? The answer, I will show, is not the result of either a linear path of technological and scientific progress, or of mischievous and crooked politicians meddling with the

proper function of a market. Instead, today's market is the direct product of the erratic and occasionally irrational series of organizational responses to technological development, political change and, social pressure. To understand the emergence and evolution of this market is to examine the workings of a field: the relationship between actors from industry, politics, and medicine as they fought to advance their, ever-changing, notion of a more perfect market for health."
Source: Pete Younkin, A Healthy Business: The Evolution of the U.S. Market for Prescription Drugs," PhD Dissertation, Sociology Department, 2010.

A distinguished critic complains about academic writing: "The amount of verbal pomposity, elaboration of the obvious, repetition, triva, low-grade statistics, tedious factification, drudging recapitulations of the half-comprehended, and generally inane and laborious junk than one encounters suggests that the thinkers of earlier ages had one decisisve advantage over those of today: they could draw on very little research. Source: Dwight Macdonald, *Masscult and Midcult*. New York: New York Review of Books, 2011.

Good Examples from Soc 280D, Fall 2008 and Spring 2011

Define constructs

- International nongovernmental organizations (INGOs) "are private voluntary organizations that carry out humanitarian relief and development activities in resource-poor countries. Most INGOs rely on home-country government contracts as their main source of funding. They also appeal directly to individuals for contributions and may form partnerships with businesses for fund-raising ventures."

- "Downsizing can be defined as 'a deliberate organizational decision to reduce the workforce that is intended to improve organizational performance' (_____ [ref], 1993). It is often achieved through layoffs, but alternative strategies, such as reduction in working hours, job sharing, hiring freezes, or natural attrition, are also used. The deliberate or intentional nature of downsizing is important, to distinguish it from the related concept of organizational decline. Whereas decline is associated with the unintentional loss of market share, revenue, or personnel, downsizing is best seen as a deliberate attempt by management to take action to adapt it to changes in its operating environment."

Motivate DVs/relationships between DVs & IVs

- "Nearly all of the research on uncertainty and organizations has portrayed uncertainty as exogenous to organizations – a problem organizations must cope with by adopting various structures and technologies…. However, uncertainty is not that simple: it is neither completely exogenous nor completely harmful. Often organizations create uncertainty – and gain by doing so…. For example, banks sometimes choose to purchase uncertain low-quality bonds and purposefully increase the uncertainty surrounding their holdings…. When do organizations chose to increase uncertainty?"

- "Developing an understanding of the goals of individual [organizational] members is important for a number of reasons. First, alignment with organizational goals is likely to be related to efficiency. A group of individuals expending energy towards personal goals is less likely to achieve the common goal. Energy directed toward personal goals will generate a sort of friction … and decrease [organizational] effectiveness….. Second, if individuals' deviations from organizational goals tend in the same direction, the organization will be unable to achieve its goals."

Formally state hypotheses

- "Ceteris paribus, organizations with larger contributions to political action committees and more extensive lobbying efforts will have lower failure rates."

- "The larger the firm, the stronger its motivation to be politically active."

- "(1) Adoption of risk-based metrics increases the number of (financial and non-financial) risks organizations identify. (2) Increased attention to risk (adoption of risk-based metrics) increases the number of uncertainties that are reported as manageable."

Explain why IVs → DVs

- **Hypothesis**: "Individuals' stated goals are more likely to coincide with organizational goals in volunteer social, or civic organizations than in business [employing] organizations."

  Explanation: "Building on Marx, an individual who feels exploited is unlikely to remain in an organization unless compelled to do so. Many individuals are dissatisfied with their jobs, but remain only to pay the bills and relish the thought of retirement. They may care little for [their employer's] goals and are intent only on performing their role satisfactorily. In contrast, organizations whose membership is not based on necessity are composed of individuals who join voluntarily. This implies some degree of alignment with goals prior to membership."