Part 3. WRITING ABOUT RESEARCH & MAKING IT INTERESTING

Stay within your data

Inferences about changes: Cross-sectional data provide no basis for talking about changes over time. To fabricate a longitudinal theory from cross-sectional data is specious science, and cross-sectional theories can be interesting in their own right. Yet authors of cross-sectional studies drew the following inferences:

- Size is a good predictor of…
- Changes in size lead to changes in…
- As an organization becomes larger through more personnel, its structural complexity becomes larger.
- As organizations become larger, (1) structuring of activities increases and (2) managerial decision making becomes more decentralized and autonomous.
- Organizational efficiency increases with these personnel additions.
- If the number of departments and branches increase[s], efficiency declines.
- The increases in size cause new jobs, departments, branches and levels.
- As state control increases, so does the likelihood of…
- As the number of specialized functional areas increases, more documentation of rules and procedures is required.
- Over time, we find female salaries lose additional ground.
- Rate of development in organizational structure as company size increased was related to…
- Those who attended the elite schools experience greater rewards as years pass.

If you have time-series data from which to draw inferences about changes, then use statistical techniques that are appropriate to time series. If you have only cross-sectional data, then draw inferences appropriate to such data: compare larger organizations with smaller ones, compare older individuals with younger ones, or compare newspapers with pharmaceutical firms.

Causal inferences: Although one might try to gather data about causality—such as time-series data at very close intervals—virtually no research does this. Thus, one should rarely draw causal inferences from data, and never draw causal inferences from cross-sectional data. However, authors of cross-sectional studies made the following statements:

- Organizational size seemed to have a negative effect on the salaries.
- …nor was there significant effect of…
- Years since the degree, being older, having longer tenure, working in smaller firms, and being located in an urban area positively influenced wage attainments.
- Size has a more pervasive effect on administrative control processes in U.S. organizations.
- The results reveal significant direct effects for technology on dimensions of organizational control.
Inferences about rationales: If you want to study rationales, ask others about them. Do not infer individual's rationales from the consequences of their actions. For example, do not interpret correlations between salaries and employees' characteristics as disclosing rationales used by salary administrators; salaries result from interactions between numerous salary administrators and numerous actual and potential employees, each of whom may have a different rationale.

- We will attempt to explore the rationale for the use [by subjects] of variables such as X and Y in decision making about Z.
- By examining these characteristics under varying conditions, we hope to illuminate better their roles in [other individuals’] decisions.

Perceptions: When describing perceptual data, frequently insert words such as perceive, believe, think, and say. Do not misrepresent perceptual data—such as questionnaire responses—as objective facts about which everyone would agree.

- Teaching skills are largely protected / Unit heads imply that teaching skills are largely protected
- core activities are examined by managers / managers say they supervise core activities
- Further, internal use of evaluation is quite low. /Further, the respondents perceive quite low internal use of evaluation.
- less than half of the agencies make frequent use of / less than half of the interviewees reported frequent use of

Generalizations: Do not draw conclusions about all organizations from observations of some organizations, or conclusions about all individuals (tasks, environments, roles, decisions) from data concerning some people (tasks, environments, roles, decisions). In particular, beware of over-generalizing inadvertently through inappropriate singular nouns. The following statement, for example,

"The rational model asserts that the role of new structure is to maintain or increase task control and coordination, while the institutional model asserts that structure is added to indicate conformity to institutional pressures and has a minor internal role."

This might be interpreted to mean:

The only conceivable rational model asserts that all organizations always introduce new structures solely to maintain or increase task control and coordination, whereas the only conceivable institutional model asserts that all organizations always add new structures almost exclusively to indicate conformity to institutional pressures and all organizations always assign minor internal roles to new structures.

Would your reaction have been different if the authors of the foregoing statement had said the following instead?

One rational model asserts that some new structures maintain or increase task control and coordination, whereas one institutional model asserts that some organizations sometimes add new structures mainly to indicate conformity to institutional pressures, and so these new
structures may perform minor internal roles. Of course, some new structures may perform none of these roles, and other new structures may simultaneously maintain task control, increase coordination, perform other internal roles, and indicate conformity to institutional pressures. Other rational models may assert that rationality entails creating new structures in order to indicate conformity to institutional pressures, and other institutional models may assert that conforming to institutional pressures does not preclude benefits from internal effects.

**Be concise**

Almost any document can be shortened by 25 percent, and effective shortening increases a document's clarity. Here are some examples.

- report back — report
- in 27 years of existence — in 27 years
- would be expected to impact upon performance causing — would cause [Please don’t use “impact” as a verb.]
- that programs should exist which would focus on — that programs should focus on
- variables that have been measured on a continuous basis — continuous variables
- the manner in which — the way
- Studies that have been done have focused — Studies have focused
- have resulted in the company being divided — have divided the company
- This is found to explain — This explains
- Functional structure is seen as more appropriate and as offering advantages. —
  Functional structures offer advantages

You can usually delete the following phrases without altering meaning:

the amount of the case of the characteristics of
the definition of the issue of the level of
the nature of the occurrence of the system of
the use of the utilization of

Some of the most important causes of verbosity are: passive verbs, forms of the verb To Be, lead-in phrases, and phrases of the form article + noun + of. Eliminating these, not only clarifies meaning, it also makes a document more interesting to read.

**Keep sentences short**

Long sentences make reading difficult and they often indicate convoluted, muddy logic. Very few sentences should exceed 20 words, and long sentences should have very simple structures. **Good writing has a cadence to it like poetry.** Don’t be afraid to intersperse short sentence with long ones. **Sometimes even a single word. Capiche?** Excessive length and unnecessary complexity make the following sentences hard to understand:
For instance, if a manager offers a type of help or has expectations about the degree of responsibility that should be given an employee which is in direct conflict with what the employee expects or desires, the outcome will not be satisfactory. For example, if a supervisor and a subordinate have disparate expectations about the subordinate's responsibilities, conflict will likely result.

Duncan later developed scales for measurement of environmental dimensions of dynamism and complexity as well as perceived environmental uncertainty and showed that perceptions of uncertainty were related to perceptions of dynamism and complexity. — Duncan later showed that perceptions of environmental uncertainty correlate significantly with perceptions of environmental dynamism and complexity.

Given the high level of aggregation of industry data from which the objective environmental measures are developed and the possibility that the perceptions of top management may be influenced by their personal characteristics as well as the capability of the information processing mechanisms of their organizations for monitoring and decoding environmental signals, it is interesting that a number of meaningful direct relationships are found. — Meaningful correlations appear even though the environmental measures use aggregated data and the top managers' perceptions reflect their personal characteristics and their organizations' environmental scanning.

**Use simple, widely understood words**

Avoid polysyllabic words, jargon, and faddish words. Especially jargon. Keep in mind that your readers include researchers outside of your subspecialty and others who do not have English as a first language. Make your work accessible to all of them.

"This taxonomic dichotomization of turnover into functional and dysfunctional categories…"

Say what???

**Measure the reading level and continue editing until reading is easy**

Your goal as a writer should be to explain your ideas clearly, not to impress readers with your erudition or to demonstrate the complexity of your thinking. When journal editors criticize the ideas in a manuscript, they have very often misunderstood what the authors intended to say. Although almost all of your intended readers have doctorates, you should not assume that they will understand your language or be well versed in your subject matter. Make it easy for your readers to understand your research, find application for it in their own work, and cite you.

To make text more readable, you need to: to substitute shorter words for longer ones, break long sentences into shorter ones, and define and/or give examples to clarify more complex terms. Do this on first reference, and your reader will keep reading.
Exhibit good taste and use correct grammar

Do not assume that people are or must be male. You can avoid having to refer to sex by writing in the plural. *They, their, and them* do not designate a sex. However, if you cannot write around the problem and must use a singular pronoun, use the phrase “him or her.”

- his grades might represent his competence—*his or her* grades might represent competencies
- to show the injured party that the organization cares about his welfare—to show injured parties that the organization cares about their welfare
- He argues that man is driven by an essential dualism; he needs both to be a part of something and to stick out.—He argues that an essential dualism drives individuals; they need both to belong to groups and to stick out as individuals.
- Excellent companies require and demand extraordinary performance from the average man.—And so do they also refuse to employ women? Be careful not to use sexist language.
Do not split infinitives

An infinitive bonds the word *to* to a verb stem; for example

- to illustrate
- to support
- to acknowledge
- to implement
- to improve
- to analyze

The basic rule is that an infinitive acts like a single word. Because *to face* is all one word, *to collectively face* injects the word *collectively* into the middle of another word, splitting the infinitive. Here are a few other split infinitives:

- to publicly acknowledge
- to successfully support
- to drastically improve
- to simultaneously affect
- to dramatically veer
- to empirically determine
- to successfully achieve
- to eventually emerge

- to measure it and explicate its properties
- to invent an environment and be part of the invention
- the political desire to control public spending and reduce the scale of government
- to effectively and efficiently implement and to furthermore evaluate
- to work together and share resources

The *Oxford* and *Merriam Webster* dictionaries have begun saying that “it is not grammatically incorrect to split infinitives.” If you choose to split an infinitive, do so only in simple cases involving only verbs and adverbs. For example, it seems reasonable to say "to publicly acknowledge" or "to publicly acknowledge and successfully support" because the meaning is quite clear. The meaning becomes much less clear when adjectives and nouns become involved, as in "the political desire to control public spending and reduce the scale of government."

Do not dangle modifying phrases

Make sure that modifying phrases actually modify the words you intend. A modifying phrase that introduces a clause should modify either the subject of the clause or the verb. **So, the noun immediately after the phrase must be a substitute or modifier for the subject of the sentence.**

"Yet in positing optimal contingent relationships between structure and strategy, the implication clearly is that some specific structure-strategy pairs yield a higher degree of effectiveness—or a lower degree—than do others." **Write this:** Yet positing optimal contingent relationships between structure and strategy clearly implies that some
structure-strategy pairs yield higher effectiveness than others. ("Positing" referred to the author of the sentence, not to "implication.")

"Considering the problems in operating statewide, further expansion seems impossible." Write this: Because of the problems . . . . ("Considering" referred to the author of the sentence, not to "expansion.")

"Using this method, elements are randomly divided into sets of three" Write this: This method divides elements into sets of three ("Using this method" referred to the author of the sentence, not to "elements.")

"in assessing informal dimensions of organizational structure, elements may be coworkers, jobs, and work activities" Write this: coworkers, jobs, or work activities may constitute elements of organizations' informal structures (Elements can’t assess dimensions of organizational structure.)

**Clauses should not end with prepositions**

What were you thinking of? Didn't Miss Stansbury teach you not to use a preposition to end a sentence with? (-: What were you thinking? Didn’t Miss Stansbury teach you not to end a sentence with a preposition?

**Only use words that appear in an English-language dictionary**

Don’t use nouns as verbs. Don’t make up acronyms for two-word phrases; use the words. Eliminate the jargon. Transition picks up the thread of a previous sentence or paragraph and carries the reader forward. It is not a single word such as “Although, while, thus” and so on.

**Authors quite often misuse Which, That, and Who**

Usually you should say *that* instead of *which*, unless *which* (a) serves as the object of a preposition, (b) follows a comma, or (c) indicates a question. Specifically, you should use *that* to initiate a *restrictive* clause, one that limits the meaning of the noun it modifies. For example, the following illustrate restrictive clauses:

- characteristics which inhibit/facilitate — characteristics that inhibit or facilitate
- organizations which do not exhibit — organizations that lack
- factors which vary — factors that vary
- advantages which apply to — advantages that apply to
- a social accounting system which includes — a social-accounting system that includes

Conversely, you should use *which* to initiate a *nonrestrictive* clause and you should set a nonrestrictive clause off with commas. For example, the following illustrate nonrestrictive clauses:
innate characteristics, which all people have,
production processes, which link inputs to outputs,
organizations, which have structures,
advantages, which bring benefits,

Never use *which* to denote people, and never use *who or whose* to denote anything except people. Do not say "those corporations who" or "the organization whose" or "industry segments whose" or "variables whose."

**While**

The word *while* means *during the time that* or *at the same time that*. While does not mean *whereas* or *even though*.

these workers now value security, while they previously valued autonomy — these workers now value security, whereas they did value autonomy

While the functional-area studies lend support for differences within firms, the remaining studies provide an overall view of factors that affect organizational performance. — Functional-area studies disclose differences within firms, whereas other studies identify factors that affect performance.

While entry barriers provide protection from entry of firms outside the industry, mobility barriers deter the movement of firms within the industry. — Entry barriers prevent entries of firms outside the industry, and mobility barriers deter the movements of firms within the industry.

**Relatively**

*Relatively* does not mean *slightly* or *somewhat*.

Do not describe characteristics as relative if their relativity is obvious. For example, largeness and smallness are always relative, so you should not say *relatively small* or *relatively large*. If you really want to compare, use comparative adjectives such as *smaller* or *larger* and specify a standard of comparison.

While both of these were relatively simple measures, — Although both of these measures were simpler than (Relative to what measures were they simpler?)

**Manager-Employee**

Most managers are employees.

a manager and an employee who have conflicting expectations about the employee's responsibilities — a supervisor and a subordinate who have conflicting expectations about the subordinate's responsibilities

**Limited**

The word *limited* means that definite boundaries circumscribe or prevent expansion. *Limited* does not mean *few*.

A limited number of studies — A few studies (All numbers of studies are limited; readers know that scientists have not conducted an infinite number of studies.)

**Data is a plural noun**, the plural of datum.
this data — these data
this data is constructed under the assumption that — these data assume that
Data includes such things as — Data include such things as
even if that data is — even if those data are
data was drawn — data were drawn

Other singulars and plurals that authors often use incorrectly include:
  medium — media
  criterion — criteria
  phenomenon — phenomena
  focus — foci
  locus — loci
  basis — bases
  emphasis — emphases