Scholarly Introductions: Making a Case for Originality and Value of Research

Preparing Future Leaders
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Introduction to Scholarly Introductions

- In traditional theses/dissertations, the introduction is the first chapter
- In articles written as thesis/dissertation, they are the first section, after the abstract
- The principles of building scholarly introductions apply to both kinds
- It is generally a good idea to delay composing an introduction until your research is completed
Scholarly Introductions

- Thesis/dissertation
- Research article
- Poster
- Grant Proposal
- Proposal Abstract
- Prospectus
Purposes of Scholarly Introductions

☐ To convince the audience that the research is original
☐ To convince the audience that the research is valuable, an important contribution to the field

Your case for originality and value is always made in the context of the field
Typical Structure of Introductions

- Lit review setting up the value context of research, general to specific
- Lit review setting up the specific research problem
- Statement of research problem
- Statement of value of solving problem
- Preview of research
Originality: Establishing a Valid Research Problem
Typical Structure of Introductions

- Lit review setting up the value context of research, general to specific
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Originality

The case for originality of research is made chiefly by establishing a convincing research problem, a gap in the present state of research in the field: the unknown.
Setting up a Research Problem

Establish what is known and then identify what remains unknown

1. A review of the pertinent literature (what is known)
2. A “negative turn” + a statement of what is unknown
Negative Turns

Negative turns are certain words and phrases that often mark gaps in what is known:

- However, but, nevertheless
- Despite the fact that…
- Little is known about…
- Further research needs to be done to…

You should be able to turn the statement of a research problem into a research question
“Previous studies using Northern blot analysis and RE-PCR detected $vfgf$ transcripts between 3 and 72 hours post infection; however, the production of vFGF during virus replication has not been determined.”
Example of Negative Turn

“*Despite* its commercial success and academic expansion, *many important questions* about the theoretical basis of Emotional Intelligence *remain.*”
Example of Negative Turn

“Famously, the *E. coli* strain named B by Delbrück and Luria in 1942 was chosen by the phage group that developed around Delbrück, Luria, and Hershey in the 1940s as the host for their common studies of the virulent phages T1-T7. However, the earlier history of B is *less well established.*”
Making a Case for a Research Problem

Establish what is known and then identify what remains unknown

1. A review of the pertinent literature (what is known)
2. A “negative turn” + a statement of what is unknown
Analyzing a Research Problem

1. Read the two introductions on page 1 of the handout.
2. In groups of two, analyze one of the introductions.
3. Identify the negative turn(s) marking the gap.
4. State what is known and what is unknown.
5. Restate the unknown as a research question.
Originality

A case for originality is effective if:

☐ The audience is convinced that your review of pertinent literature adequately describes what is known in the field

☐ The audience is convinced that your statement of the gap in what is known, your research problem, is legitimate
Brainstorming a Research Problem

1. Take 5 minutes to do some brainstorming on a piece of paper about your research project: (a) what is known, (b) what is the unknown, and (c) what your research question is.

2. Then in the next 5 minutes pair up with someone and describe your research problems to each other. Provide feedback on strengthening the case for originality.
Value: Answering the “So What?” Question of Your Research
Value

- An introduction should answer the “so what?” question, the value of the research to the field.
- Typically the solution to a research problem is not valuable in itself because it is defined so narrowly.
- Value is usually based on the implications of the research to a broader issue in the field.
- The introduction sets up a more detailed treatment of value in discussion/conclusion.
Two Kinds of Value

- Value that is primarily intrinsic to the field (it will not be applied to benefit others outside the field)
- Value that is primarily extrinsic to the field (its intrinsic value is based on an extrinsic value important to the field)
Making a Case for the Value of Your Research

- Establish the *value context* for your research by using a lit review to set up the broader issue for your research.

- State the value of your research by showing how solving the research problem affects the broader issue in the value context.
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Analyzing a Case for Value

- Read “Sources of Corruption in Authoritarian Regimes”

- In pairs, analyze the case for value: (a) What is the research problem? (b) What is the value context established in the first sentence? (c) What is the value of solving the research problem in this context?

- Is the primary value of this research intrinsic or extrinsic to the field?
Example: Heinisch and Kirby

1. Read first and last paragraphs of “Fractalkine/CX3CL1 Enhances Gaba Synaptic Activity at Serotonin Neurons in the Rat Dorsal Raphe Nucleus”

2. What is the broad value context? What is the value of solving the research problem in this context?

3. Is the value primarily intrinsic or extrinsic to the field?
Linking Value Statement to Context

1. Psychological stress alters immune responses
2. Serotonin (5-HT) plays an important role in neuronal response to stress
3. Chemokines interact with 5-HT to create symptoms of psychological stress
4. A type of chemokine, CX3CL1, binds with CX3CR1 to create inflammatory reactions
5. CX3CL1 and CX3CR1 are expressed in certain regions of the brain
6. CX3CL1 appears to provide a neuroprotective action in the brain

“An impact of the chemokines, including CX3CL1, on the 5-HT system would have implications for stress-induced immunological dysfunction as well as our understanding of anxiety and depressive disorders associated with immune disorders.”
Value

A case for value is convincing if:

- It makes a clear statement of the value context for the research.
- It persuades the reader that the value context is important to the field.
- It makes a convincing connection between solving the research problem and the value context.
Brainstorming a Case for Value

1. For 5 minutes, briefly summarize your research project and brainstorm the value context for the research.

2. State the value context. Describe how solving your research problem is important within this value context. Is it primarily intrinsic or extrinsic to the field?

3. For 5 minutes, divide in pairs and make a case for the value of your research
Structure of Introductions

GENERAL to specific
Example: Heinisch and Kirby

1. Psychological stress alters immune responses
2. Serotonin (5-HT) plays an important role in neuronal response to stress
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Little is known about chemokine regulation of 5-HT
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“An impact of the chemokines, including CX3CL1, on the 5-HT system would have implications for stress-induced immunological dysfunction as well as our understanding of anxiety and depressive disorders associated with immune disorders.”
Conclusions/Discussions Often Reverse Structure of Introductions

1. Summary of the results of the examination of the neuroanatomical relationship between CL3CL1 and the 5-HT system
2. Comparison with other related research
3. Implications of impact of chemokines on 5-HT
4. Implications of changes in 5-HT on immune system
5. Connections between immune system and psychological stress
Preview of Research
In traditional theses/dissertations, it is typically a chapter-by-chapter description of what follows the introduction, usually the last section of the introductory chapter.

In articles, it is a brief, usually one-sentence statement of the research, often in the last paragraph of the introduction.

The preview of research must be directly related to *research problem*, fills in the gap.
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- Statement of value of solving problem
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Example

“Here we explore whether phylogenies can be reconstructed from LTR Viterbi alignments for the three groups and compare them with trees obtained from pol gene alignments.”
Example

“This study shows timing of vFGF production during infection, its secretion fate, and in vitro assays that suggest a function during virus infection of susceptible hosts.”
Preview of Research

A good preview of research

☐ Establishes expectations for the readers for what they will find in the document

☐ Provides a link between the research problem and how the problem will be solved

☐ Serves as a segue to the rest of the research document
Process for Building Introductions

1. Establish the research problem, the gap, what is known and the unknown
2. Identify literature to present what is known
3. State the research problem with negative turn
4. Determine the source of value of solving research problem, a broader issue in field
5. Identify literature to create the value context for and link to the research problem
6. Write a statement of value with implications of research to value context
7. Write preview of research
Typical Order for Introductions

1. Lit review setting up the value context of research, general to specific
2. Lit review setting up the research problem, what is known
3. Statement of research problem, usually with negative turn
4. Statement of value of solving problem, linking back to value context
5. Preview of research
Purposes of Scholarly Introductions

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