Does this text make sense and flow well?
Strategies for creating and revising for coherence and cohesion

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Coherence (the pieces make sense as a whole)

Cohesion (two pieces fit together)
Coherence

“...is an experience we create for ourselves as we make our own sense of what we read” (Williams 2007).

Reader’s have:

• Genre expectations (e.g., IMRaD, referencing style)
• Department expectations (e.g., show evidence that you have completed your program...)
• Explicit expectations the text sets up (e.g., aim & objectives or RQ)
• Implicit expectations about how texts work (e.g., how information placement shapes what we expect from the text)
Degree to which errors bother readers

- Word choice
- Word location
- Sentence structure
- Sentence location
- Paragraph structure
- Paragraph location
- Section structure
- Section location

Bothers little

Bothers a lot

Modified from Scientific Writing and Communication (Hofmann)
“...is an experience we create for ourselves as we make our own sense of what we read” (Williams 2007).

**Global level**: “a sense of the whole;” understanding of what all sentences/paragraphs/sections add up to.

**Local level**: a clear sense of what an individual paragraph or an individual sentence communicates.
Global Coherence

1. There’s a point
2. Everything is relevant
3. There’s a logical order

See Style: Lessons in Clarity and Grace (Williams 2007)
Global Coherence

1. There’s a point
   A. Short introductory segment for sections, sub-sections, and paragraphs
   B. The end of the intro segment is the point/topic
   C. The end of the point/topic sentence contains words/concepts that you develop in that section

2. Everything is relevant

3. There’s a logical order

See Style: Lessons in Clarity and Grace (Williams 2007)
I. Introduction
   A. Context
   B. Problem
   C. What other researchers have said about the problem
   D. Why we should care about the problem
   E. Aim (the point of the whole text)

II. Methods
   A. Design
   B. Data collection

III. Results

IV. Discussion

V. Conclusion
I. Introduction
   A. Skylights can improve quality and amount of daylight in a space. They increase heat loss but also solar heat gains.....

   B. Successful integration of skylights depends on a number of factors; if not done properly, they create many problems....

   C. Others have....but not....

   D. This is important for understanding....and to be able to assist designers with skylight positioning for new buildings and renovations.

   E. This study aims to analyze the impacts of integrating skylight models on energy consumption, thermal comfort, and daylight conditions in a typical classroom in Denmark.
Thirty sixth-grade students wrote essays that were analyzed to determine the effectiveness of eight weeks of training to distinguish fact from opinion. That ability is an important aspect of making sound arguments of any kind. In an essay written before instruction began, the writers failed almost completely to distinguish fact from opinion, but did so inconsistently. In three more essays, they distinguished fact from opinion more consistently, but never achieved the predicted level of performance. In a final essay written six months after instruction ended, they did no better than they did in the pre-instruction period, but it was inconsistent, and six months after instruction it had no measurable effect.

Examples from Style: Lessons in Clarity and Grace (Williams 2007)
Thirty sixth-grade students wrote essays that were analyzed to determine the effectiveness of eight weeks of training to distinguish fact from opinion. That ability is an important aspect of making sound arguments of any kind. In an essay written before instruction began, the writers failed almost completely to distinguish fact from opinion, but did so inconsistently. In three more essays, they distinguished fact from opinion more consistently, but never achieved the predicted level of performance. In a final essay written six months after instruction ended, they did no better than they did in the pre-instruction period, but it was inconsistent, and six months after instruction it had no measurable effect.
In this study, thirty sixth-grade students were taught to distinguish fact from opinion. They did so during the instruction period, but the effect was inconsistent, less than predicted, and six months after instruction ended, the instruction had no measurable effect. In an essay written before instruction began, the writers failed almost completely to distinguish fact from opinion. In an essay written after four weeks of instruction, the students visibly attempted to distinguish fact from opinion, but did so inconsistently. In three more essays, they distinguished fact from opinion more consistently, but never achieved the predicted level of performance. In a final essay written six months after instruction ended, they did no better than they did in their pre-instruction essay. We thus conclude that short-term training to distinguish fact from opinion has no consistent or long-term effect.
In Russia, the Siberian silk moth is an important disturbance factor and since it is migrating into new areas further west and north it may become a larger problem. Insects in the European Russia do not seem to be such of a problem as in Siberia (Shorohova et al., 2009). In North America, insects are an important disturbance factor but there are regional differences. The only province experiencing severe attack from mountain pine beetle is British Columbia, but its range is projected to expand. Spruce budworm is present over all of Canada. In Fennoscandia the European spruce bark beetle is the most important insect, but it has so far not shown the same severe damage to large regions as the outbreaks of mountain pine beetle in Canada.

*grammar errors not fixed
In the case of insects, the differences between the regions that are most evident are the insect species present. In Russia, the Siberian silk moth is an important disturbance factor and since it is migrating into new areas further west and north it may become a larger problem. Insects in the European Russia do not seem to be such of a problem as in Siberia (Shorohova et al., 2009). In North America, insects are an important disturbance factor but there are regional differences. The only province experiencing severe attack from mountain pine beetle is British Columbia, but its range is projected to expand. Spruce budworm is present over all of Canada. In Fennoscandia the European spruce bark beetle is the most important insect, but it has so far not shown the same severe damage to large regions as the outbreaks of mountain pine beetle in Canada.
1. In addition to providing habitats and the possibility for species to migrate in the landscape, green infrastructure has the role of providing ecosystem services.

1a. In addition to providing ecosystem services, green infrastructure provides habitats and the possibility for species to migrate in the landscape.

2. In order to create a habitat for certain species or achieve a certain ecosystem service, a minimum biotope area may be required within the landscape.

3. The common toad was used in this study to model migration in the landscape but the toad is not representative of all species.
Global Coherence

1. There’s a point
2. Everything is relevant
   A. Anything *can* be relevant
   B. Not everything that seems relevant to you will be relevant to your readers
3. There’s a logical order

See Style: Lessons in Clarity and Grace (Williams 2007)
We analyzed essays written by sixth-grade students to determine the effectiveness of training in distinguishing fact from opinion. In an essay written before training, the students failed almost completely to distinguish fact and opinion. These essays were also badly organized in several ways. In the first two essays after training began, the students attempted to distinguish fact from opinion, but did so inconsistently. They also produced fewer spelling and punctuation errors. In the essays four through seven, they distinguished fact from opinion more consistently, but in their final essay, written six months after completion of instruction, they did no better than they did on their first essay. Their last essay was significantly longer than their first one, however. Their training thus had some effect on their writing during the training period, but it was inconsistent and transient.
We analyzed essays written by sixth-grade students to determine the effectiveness of training in distinguishing fact from opinion. In an essay written before training, the students failed almost completely to distinguish fact and opinion. These essays were also badly organized in several ways. In the first two essays after training began, the students attempted to distinguish fact from opinion, but did so inconsistently. They also produced fewer spelling and punctuation errors. In the essays four through seven, they distinguished fact from opinion more consistently, but in their final essay, written six months after completion of instruction, they did no better than they did on their first essay. Their last essay was significantly longer than their first one, however. Their training thus had some effect on their writing during the training period, but it was inconsistent and transient.
Handout:

Introduction paragraphs from “Planning Green Infrastructure Using Habitat Modelling: A Case Study of the Common Toad in Lomma Municipality,” BSc thesis

Any changes you could make in the topic sentences of these paragraphs? Anything seem irrelevant here?
3. There’s an order

A. Chronological (time)
   A. As a narrative
   B. Cause and effect
   C. Earlier to later or later to earlier

B. Coordinate (pillars)
   A. Simple to complex
   B. More familiar to less familiar
   C. Less contestable to more contestable
   D. Other thematic organization

C. Logical
   A. General analysis to specific applications/example
   B. Example to generalization
   C. Assertion to contradiction
   D. Claim-reasons-evidence
   E. Something else?
Revision \(\rightarrow\) to re-see

Strategies to target global coherence
Revision strategy: reverse outline

1. Number your paragraphs.
2. Identify the topic of each paragraph.
   a. Is there a recognizable topic sentence?
   b. How long is the paragraph?
      i. Does the topic seem sufficiently developed?
      ii. Is there more than one topic in the paragraph?
3. Arrange these topics in an outline.
4. Analyze this outline, assessing the logic (where elements are placed in relation to one another) and the proportion (how much space is being devoted to each element).
5. Use this analysis to create a revised outline.
6. Use this revised outline to reorganize your text.
7. Go back to your answers in 2a and 2b to help you create topic sentences and coherence in your paragraphs.

See Explorations of style
Revision strategy: focus on the introductions

to the whole text

to the major sections

to the subsections

to long paragraphs

1. Underline the point/topic
2. Circle keywords/concepts in the point sentence
3. Trace the development of those concepts
Revision strategy: see big picture

Print out your text!
Revision strategy: compare intro & conclusion

Introduction
Blah blah blah blah blah Blah blah blah blah blah Blah blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah blah

Blah blah blah blah Blah blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah

Conclusion
Blah blah blah blah blah Blah blah blah blah blah Blah blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah blah Blah blah

Blah blah blah blah Blah blah blah blah Blah blah blah Blah blah blah Blah blah

Are the expectations you set up in your introduction mirrored in your conclusion?
Revision strategy: topic sentence paragraph

1. Identify every paragraph’s topic/point sentence.
2. Copy and paste these sentences into a separate document to create a “pseudo-paragraph.”
3. This paragraph won’t flow very well, and will be really long, but it should be globally coherent.
4. Often works best as a confirmation that you have a coherent text and are ready to move on to local level edits.

See Explorations of style
Local Coherence

1. Readers can easily recognize the “main character” in a passage, and that character is often the grammatical subject.

Williams, Style: Lessons in Clarity and Grace & Booth, et al, The Craft of Research
Local Coherence (paragraph level)

Consistent ideas toward the beginnings of sentences, especially in their subjects, help readers understand what a passage is generally about. A sense of coherence arises when a sequence of topics comprises a narrow set of related ideas. But the context of each sentence is lost by seemingly random shifts of topics. Unfocused, even disorganized paragraphs result when that happens.

Williams, Style: Lessons in Clarity and Grace
Local Coherence

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Local Coherence

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Local Coherence

Consistent ideas toward the beginnings of sentences, especially in their subjects; Readers; A sense of coherence; a sequence of topics; the context of each sentence; Unfocused, even disorganized paragraphs; that
Readers understand what a passage is generally about when they see consistent ideas toward the beginnings of sentences, especially in their subjects. They feel a passage is coherent when they read a sequence of topics that focuses on a narrow set of related ideas. But when topics seem to shift randomly, readers lose the context of each sentence. When that happens, they feel they are reading paragraphs that are unfocused and even disorganized.

Williams, Style: Lessons in Clarity and Grace
Local Coherence (sentence level)

Readers expect the grammatical subject of the sentence to be its topic

It is impossible for your claim to be proved.

In regard to this question, I believe more research is needed.

It is likely that our proposal will be accepted.
Local Coherence (sentence level)

Readers expect the grammatical subject of the sentence to be its topic

*Your claim* cannot be proved.

In regard to this question, I believe more research is needed.

It is likely that our proposal will be accepted.

Williams, Style: Lessons in Clarity and Grace
Local Coherence (sentence level)

Readers expect the grammatical subject of the sentence to be its topic

*Your claim* cannot be proved.

*This question* needs more research (to be answered).

It is likely that our proposal will be accepted.

*Williams, Style: Lessons in Clarity and Grace*
Readers expect the grammatical subject of the sentence to be its topic

*Your claim* cannot be proved.

*This question* needs more research (to be answered).

*Our proposal* will likely be accepted.
Local Coherence (sentence level)

Readers expect the grammatical subject of the sentence to be its topic

Looking at their future residential intentions, it can be seen that 43.8% of them are very likely to move in the coming five years.
1. Readers can easily recognize the “main character” in a passage, and that character is often the grammatical subject.

2. Avoid “throat-clearing” that pushes the subject far away from the beginning.
And therefore,
it is important to note that,
in Eastern states since 1980,
acid rain has become a serious problem.
When starting sentences, avoid “throat-clearing” that pushes the topic/subject further away.

Since 1980, therefore, acid rain has become a political problem in the Eastern states.

or

Acid rain, therefore, has become a political problem in the Eastern states since 1980.
As regards the perceived limitations of urban living, out of the list of variables, the great majority of them don’t apply in the case of the City of Geneva.
Local Coherence

1. Readers can easily recognize the “main character” in a passage, and that character is often the grammatical subject.

2. Avoid “throat-clearing” that pushes the subject far away from the beginning.

3. Readers see the most important actions expressed as verbs, not as nouns.

Williams, Style: Lessons in Clarity and Grace & Booth, et al, The Craft of Research
A. The stripping of rain forests in the service of short-term economic interests could result in damage to the earth’s biosphere.

B. If rain forests are stripped to serve short-term economic interests, the earth’s biosphere may be damaged.

Booth, et al, *The Craft of Research*
Our standardization of an index for the measurement of thought disorders has made possible the quantification of response as a function of treatment differences.

Now that we have standardized an index to measure thought disorders, we can quantify how patients respond to different treatments.

Booth, et al, The Craft of Research
To Diagnose & Revise

1. Underline the first 6 or 7 words of every clause, both main and subordinate.
2. Are the subjects concrete characters?
   2a. Are the verbs specific actions (instead of have, make, do, be, etc.)?
3. Find the characters.
4. Find the actions.
5. Create clauses with main characters as the subjects and their actions as verbs.

Williams, Style: Lessons in Clarity and Grace & Booth, et al, The Craft of Research
well-connected sentences, largely dependent on how one ends and the next one begins.

1. Often uses old-to-new information structure.
2. Shouldn’t be faked with connection words.

Williams, Style: Lessons in Clarity and Grace & Booth, et al, The Craft of Research
A. The quality of our air and even the climate of the world depend on healthy rain forests in Asia, Africa, and South America. But these rain forests are now threatened with destruction by the increasing demand for more land for agricultural use and for wood products used in construction worldwide.

B. The quality of our air and even the climate of the world depend on healthy rain forests in Asia, Africa, and South America. But the increasing demand for more land for agricultural use and for wood products for construction worldwide now threatens these forests with destruction.
A. The quality of our air and even the climate of the world depend on healthy **rain forests** in Asia, Africa, and South America. But **these rain forests** are now threatened with destruction by the increasing demand for more land for agricultural use and for wood products used in construction worldwide.

B. The quality of our air and even the climate of the world depend on healthy **rain forests** in Asia, Africa, and South America. But **the increasing demand for more land for agricultural use and for wood products for construction worldwide** now threatens these forests with destruction.
Old to new structure

• Creates “flow” in a paragraph
• Some try to use logical connectors like “moreover” and “however” to establish flow….but these don’t work on their own
• Instead, consider following a progression from old information (in the subject position or toward the end of the previous sentence) to new information (toward the end of the next sentence).
According to a recent survey, 26% of all American adults, down from 38% 30 years ago, now smoke. This __________ can be partly attributed to the mounting evidence linking smoking and fatal diseases, such as cancer.
Sayner, Wisconsin, is the snowmobile capital of the world. The buzzing of snowmobile engines fills the air, and their tank-like tracks crisscross the snow. The snow reminds me of Mom’s mashed potatoes, covered with furrows I would draw with my fork. Her mashed potatoes usually make me sick—that’s why I play with them. I like to make a hole in the middle of the potatoes and fill it with melted butter. This behavior has been the subject of long chats between me and my analyst.
Old to new structure

• Creates “flow” in a paragraph

• Some try to use logical connectors like “moreover” and “however” to establish flow….but these don’t work on their own

• Instead, consider following a progression from old information (in the subject position or toward the end of the previous sentence) to new information (toward the end of the next sentence).

• Must be balanced with some repetition of the main “character” in the passage.
Readers understand what a passage is generally about when they see consistent ideas toward the beginnings of sentences, especially in their subjects. They feel a passage is coherent when they read a sequence of topics that focuses on a narrow set of related ideas. But when topics seem to shift randomly, readers lose the context of each sentence. When that happens, they feel they are reading paragraphs that are unfocused and even disorganized.

Williams, Style: Lessons in Clarity and Grace
<table>
<thead>
<tr>
<th>USE</th>
<th>TRANSITION WORDS</th>
<th>TRANSITION PHRASE</th>
<th>TRANSITION SENTENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addition</td>
<td>again, also, further, furthermore, in</td>
<td>In addition to X, we...</td>
<td>Further experiments showed</td>
</tr>
<tr>
<td></td>
<td>addition, moreover</td>
<td>Besides X,...</td>
<td>that...</td>
</tr>
<tr>
<td>Conversion</td>
<td>clearly, evidently, obviously, undesirably</td>
<td>Grant that X is...</td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td>also, likewise, similarly, etc.</td>
<td>As seen in...</td>
<td>When A is compared with B...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the same way</td>
<td>As reported by...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When compared to...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One difference is that...</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Although X differed...</td>
<td></td>
</tr>
<tr>
<td>Example</td>
<td>for example, specifically</td>
<td>To illustrate X...</td>
<td>An example of X is that...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>That is,...</td>
</tr>
<tr>
<td>Explanation</td>
<td>here, therefore, in short</td>
<td>Because of X...</td>
<td>One reason is that...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this experiment...</td>
<td>Because X is...</td>
</tr>
<tr>
<td>Purpose</td>
<td>for this purpose,</td>
<td>For the purpose of...</td>
<td>The purpose of X was to...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To this end,...</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>To determine XYZ, we...</td>
<td></td>
</tr>
<tr>
<td>Result</td>
<td>consequently, generally, hence, therefore, thus</td>
<td>As a result of...</td>
<td>Evidence for XYZ was that...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Analysis of ABC showed...</td>
</tr>
<tr>
<td>Sequence/time</td>
<td>after, finally, first, later, last, meanwhile, next</td>
<td>After careful analysis of X...</td>
<td>After X was completed,...</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>in brief, in conclusion, in fact, in short, in summary</td>
<td>During centrifugation...</td>
<td>When we determined X...</td>
</tr>
</tbody>
</table>

From Hofmann’s *Scientific Writing and Communication* (p. 110)
The biological clock functions regardless of the normal 24-hour cycle of light and darkness. Light is involved in resetting and regulating the clock.

Although the biological clock functions regardless of the normal 24-hour cycle of light and darkness, light is involved in (or: plays an important role in) resetting and regulating the clock.
To Diagnose & Revise

1. Underline the first 6 or 7 words of sentence.
2. Is there something in those words that connects to the previous sentence?
3. If not, is it because the main character is repeated instead (often you will refer to the previous sentence and repeat a character simultaneously)?
4. Do you rely on a linking word to fake a transition?
5. Revise so that the first 6 or 7 words refer to familiar information, either a new idea from the previous sentence and/or a character.

Modified slightly from Williams, Style: Lessons in Clarity and Grace & Booth, et al, The Craft of Research
Animals, particularly domestic animals, are important reservoirs and sources of diseases to humans. Salmonella species are normally found in the intestinal tract of animals such as poultry and cattle. When humans ingest contaminated food, the salmonellae can cause disease called Salmonellosis. In terms of animal disease transmission, humans often represent a dead end because the disease cannot be transferred from human to human. Salmonellosis may be acquired from animals, but the infected human can also serve as a source of disease to other humans.
Animals, particularly domestic animals, are important reservoirs and sources of disease to humans. *Salmonella* species are normally found in the intestinal tract of animals such as poultry and cattle. When humans ingest contaminated food, the salmonellae can cause disease called *Salmonellosis*. In terms of animal disease transmission, humans often represent a dead end because the disease cannot be transferred from human to human. *Salmonellosis* may be acquired from animals, but the infected human can also serve as a source of disease to other humans.
Problems with old-to-new, character repetition, & linking words?

Handout:

Revise this paragraph so that the topic is clearer and create a balance between topic/subject repetition, old-to-new info structure, and linking words.

Example from Hofmann’s Scientific Writing and Communication
Animals, particularly domestic animals, are important reservoirs and sources of disease to humans. Animals such as poultry and cattle, for example, often carry *Salmonella* species in their intestinal tracts. When these animals become contaminated food for humans, the salmonellae can cause disease called *Salmonellosis*. Although humans often represent a dead end for animal disease transmission, a human infected with *Salmonellosis* can serve as a source of disease to other humans.
Remember!

Degree to which errors bother readers

- Word choice
- Word location
- Sentence structure
- Sentence location
- Paragraph structure
- Paragraph location
- Section structure
- Section location

Bothers little

Bothers a lot

From *Scientific Writing and Communication* (Hofmann)