Writing Clinic 2
Exercise C: Old to new
The first few lessons

1. Understanding Style
2. Correctness
3. Actions
4. Characters
5. Cohesion & Coherence
6. Emphasis
“If he would inform, he must advance regularly from Things known to things unknown, distinctly without Confusion, and the lower he begins the better.

It is a common Fault in Writers, to allow their Readers too much knowledge: They begin with that which should be the Middle, and skipping backwards and forwards, ‘tis impossible for any one but he who is perfect in the Subject before, to understand their Work, and such an one has no Occasion to read it.”

—Benjamin Franklin
The Main Principles (Last Time)

- Make Main Character Subjects
- Make Important Actions Verbs

- The grammar and story should match up:

<table>
<thead>
<tr>
<th>Fixed</th>
<th>Subject</th>
<th>Verb</th>
<th>Variable</th>
<th>Character</th>
<th>Action</th>
</tr>
</thead>
</table>

We can integrate the principles from this lesson with our others:
The Main Principles (with Coherence)

- Make Main Character Subjects
- Make Important Actions Verbs
- Put old information before new information (within a sentence)
- Keep topic reasonably consistent (through the paragraph)

<table>
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<th>Stress</th>
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</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Short, simple, familiar</td>
<td>Long, complex, new</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed</th>
<th>Subject</th>
<th>Verb</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Character</td>
<td>Action</td>
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</tbody>
</table>
Cohesion: The Sense of Flow

What is the problem here?

• Some astonishing questions about the nature of the universe have been raised by scientists studying black holes in space. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole. So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

• We study black holes. The collapse of a dead star…

• What’s the problem? What’s the solution?
Cohesion: The Sense of Flow
Solution: Passive Voice (gasp!)

• Some astonishing questions about the nature of the universe have been raised by scientists studying black holes in space. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole. So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.

• Some astonishing questions about the nature of the universe have been raised by scientists studying black holes in space. A black hole is created by the collapse of a dead star into a point perhaps no larger than a marble. So much matter compressed into so little volume changes the fabric of space around it in puzzling ways.
The Main Principles (with Coherence)

- Make Main Character Subjects
- Make Important Actions Verbs
- Put old information before new information.
- When in conflict, favor the third!
Coherence: A Sense of the Whole

- **Cohesion**: Pairs of sentences fitting together.
- **Coherence**: All sentences add up.

- There are party games for drawing and writing to produce cohesive work without coherence.
- Such methods should not be used to write papers.
How to be coherent?

• The key concept is the **topic** of the sentence.

• The topic is not always the grammatical subject. Regarding this **question**, we leave it as future work.

• They suggest underlining the first 7-8 words of each sentence up to the main verb (and maybe first 7-8 words of every clause).

• If you do this for all sentences in the paragraph, the underlined words should constitute a small set of related ideas.
Emphasis: How to End Sentences

• New, complex and surprising things at the end.
• They suggest putting technical terms at the end.
• Finally, the end of the sentence, gets the last word.
  Which would be better marketing:
  • The point is to highlight our success, not to emphasize our failures.
  • The point is not to emphasize our failures, but to highlight our success.
• Check how you naturally emphasize the end of a good sentence.
Exercise

• Go through the text and mark the old and new information in each sentence. If there is more than one piece of new information, mark the most important new information.

• I [Ramsey] usually mark with a dotted underline for old information and a solid underline for new information, but you should mark using a system that works for you.

• Identify one or two sentences that you would like to revise based on information flow, and to suggest a revision for each.
Post-mortem
My overall impressions

- I didn’t choose the best text for this exercise…

- There were too many extraneous details to make the comparison between the key re-ordering that supposedly improved cohesion.

- And it seemed to at the moment that the old-new analysis doesn’t quite get at the actual dependencies.

- But now that I’ve looked at it, there was actually a missing link in the rewrite. (I actually think this is precisely what Karoliine & Simmo was trying to tell me.)
For any subset $Y \subseteq \text{Vars}$, let $\mathcal{R}^Y = \{ r \mid r \in \mathcal{R}, r|_Y = r \}$ denote the set that collects all abstract values from $\mathcal{R}$ containing information on only the variables in $Y$. Now let $\mathcal{S} \subseteq 2^{\text{Vars}}$ be a collection of clusters of variables. Then any relation $r \in \mathcal{R}$ can be approximated by a meet of relations from $\mathcal{R}^Y$ ($Y \in \mathcal{S}$). As specific clusters, we consider for $k \geq 1$, the set $\mathcal{S}_k$ of all non-empty subsets $Y \subseteq \text{Vars}$ of cardinality at most $k$. Some relational domains, on the other hand, can fully be recovered from their restrictions to specific subsets of clusters. Let us call a relational domain $\mathcal{R} k$-decomposable if each abstract value from $\mathcal{R}$ can be precisely expressed as the meet of its restrictions to clusters of $\mathcal{S}_k$ and...
Let $\mathcal{S} \subseteq 2^{\text{Vars}}$ be a collection of clusters of variables. For any cluster $Y \subseteq \text{Vars}$, let $\mathcal{R}^Y = \{ r \mid r \in \mathcal{R}, r|_Y = r \}$ denote the set that collects all abstract values from $\mathcal{R}$ containing information on only the variables in $Y$. Given an arbitrary subset of clusters $\mathcal{S} \subseteq 2^{\text{Vars}}$, any relation $r \in \mathcal{R}$ can be approximated by a meet of relations from $\mathcal{R}^Y$ ($Y \in \mathcal{S}$). Some relational domains, however, can be fully recovered from their restrictions to specific subsets of clusters. We consider for $k \geq 1$, the set $\mathcal{S}_k$ of all non-empty subsets $Y \subseteq \text{Vars}$ of cardinality at most $k$. We call a relational domain $\mathcal{R}$ $k$-decomposable if each abstract value from $\mathcal{R}$ can be precisely expressed as the meet of its restrictions to clusters of $\mathcal{S}_k$ and ...
The missing link
This connection was implicit in my head

Let \( S \subseteq 2^\text{Vars} \) be a collection of clusters of variables. For any cluster \( Y \subseteq \text{Vars} \), let \( \mathcal{R}^Y = \{ r \mid r \in \mathcal{R}, r|_Y = r \} \) denote the set that collects all abstract values from \( \mathcal{R} \) containing information on only the variables in \( Y \).

Given an arbitrary subset of clusters \( S \subseteq 2^\text{Vars} \), any relation \( r \in \mathcal{R} \) can be approximated by a meet of relations from \( \mathcal{R}^Y \) (\( Y \in S \)). Some relational domains, however, can be fully recovered from their restrictions to specific subsets of clusters. As such specific clusters, we consider for \( k \geq 1 \), the set \( S_k \) of all non-empty subsets \( Y \subseteq \text{Vars} \) of cardinality at most \( k \). We call a relational domain \( \mathcal{R} \) \( k \)-decomposable if each abstract value from \( \mathcal{R} \) can be precisely expressed as the meet of its restrictions to clusters of \( S_k \) and \ldots
Conclusions

• This session does illustrate the point...

• That I should prepare the exercises properly?
  That I should listen to my students?

• No, those are not the kind of lessons one can learn easily.

• But you should listen to other people about what is obvious and what isn’t…

• Obviously, we’re not going insert such things into the paper because we’re over the page limit. It’s clarity and grace and negative `\vspace`. 