Abstracts 2: Creating Flow

Madeline Fisher

BACTER Journal Club

9/29/09

Last time…

We talked about the *content* of the abstract:

- Background
- Statement of the problem
- Description of the approach
- Major findings
- Significance

BACTER

Today…

We'll talk about the *style* of the abstract, how to make the writing flow for your readers…

BACTER

What is flow?

"Writing that when read, feels to the reader as if it's all one seamless thread…(allowing) the reader to focus on what you have to say, rather than how you're saying it."

"Flow is simply writing that moves fluently from one idea, phrase, or sentence to the next. Flow enables the reader to grasp concepts and images along a continuum…"

BACTER

Why is flow important?

People tend to skim through abstracts very quickly, which means you need to make them as easy as possible to read.

BACTER

How can we create flow?

- Walk the reader through step-by-step
- Use connecting words
- Try combining sentences

BACTER

Escort the reader step-by-step

It's like giving someone directions to your house…

- You start from where the person is
- You write down the direction to go from there to reach the first turn or landmark
- Maybe you throw in some detail to make the turn easier to spot ("there's a gas station on the corner where you turn")
- You then guide the person to another landmark or turn, and then another and another…
- Until he finally arrives at his destination

BACTER

Escort the reader step-by-step

"This is an example of writing logically. You can't put in the third turn before you put in the first or second. **Everything has to be in order**."

–SE Jones, Associated Content

BACTER

Mind the gaps

***Not only does everything need to be in order, but you also need to avoid creating gaps that require your readers to take a leap, or backtrack through your prose.*

The next slide illustrates one such gap.

BACTER

Mind the gaps

A mild solvent **extraction procedure** and a **sorption–desorption** experiment were used to predict the availability of phenanthrene and pyrene. Results showed that the **extractable amounts** of phenanthrene and pyrene in both soil types increased with increased citric or oxalic acid concentration. Citric acid addition promoted phenanthrene and pyrene **extraction** to a greater degree than oxalic acid. Compared with freshly spiked soils, the **extractable amounts** of phenanthrene and pyrene with the addition of LMWOAs decreased significantly after 60 days of cultivation. Soils with higher values of soil organic carbon content (foc) showed decreased phenanthrene and pyrene availability after the addition of LMWOAs. **The sorption and desorption results** also demonstrated the enhanced availability of PAHs with LMWOA addition.

BACTER

Mind the gaps

***In this example, the authors have inadvertently created a gap by introducing the **sorption-desorption** experiment way at the top and then failing to discuss it any further until much later. As a result, the findings of this experiment, when they finally arrive, seem unrelated to what came before (take away my highlighting to really see the effect).*

BACTER

One possible fix

Results from a mild solvent extraction procedure ~~**and a sorption–desorption experiment were used to predict the availability of phenanthrene and pyrene**~~ showed that the extractable amounts of phenanthrene and pyrene in both soil types increased with increased citric or oxalic acid concentration; however, citric acid promoted phenanthrene and pyrene extraction to a greater degree than oxalic acid. Compared with freshly spiked soils, the extractable amounts of phenanthrene and pyrene with the addition of LMWOAs decreased significantly after 60 days of cultivation. Soils with higher values of soil organic carbon content (foc) showed decreased phenanthrene and pyrene availability after the addition of LMWOAs. **A sorption–desorption experiment** also demonstrated enhanced availability of phenanthrene and pyrene with LMWOA addition.

BACTER

Use connecting words

Connecting words serve flow by telling the reader exactly how two sentences are related; i.e., they provide the transitions between ideas.

Result: therefore, thus, hence

Example: for example, specifically, an illustration

Contrast: but, yet, however, on the other hand

Time: meanwhile, after, later

Sequence: first, then, finally

Two sentences in need of connection

Original: Results showed that the extractable amounts of phenanthrene and pyrene in both soil types increased with increased citric or oxalic acid concentration. Citric acid addition promoted phenanthrene and pyrene extraction to a greater degree than oxalic acid.

Two sentences in need of connection

Revised: Results showed that the extractable amounts of phenanthrene and pyrene in both soil types increased with increased citric or oxalic acid concentration; **however,** citric acid addition promoted phenanthrene and pyrene extraction to a greater degree than oxalic acid.

Shorter isn't always better

***We often hear that we should keep our sentences as short as possible for clarity's sake. But a longer sentence, if well structured, can sometimes flow better than a bunch of shorter ones.*

BACTER

How might these sentences be combined?

Original: The impact of low-molecular-weight organic acids (LMWOAs) on the availability of phenanthrene and pyrene was investigated using laboratory batch assays. Experiments were conducted with two types of soil with different organic contents. The LMWOAs used were citric and oxalic acid.

One possible solution…

The impact of low-molecular-weight organic acids (LMWOAs) on the availability of phenanthrene and pyrene was investigated using laboratory batch assays. Experiments were conducted with two types of soil with different organic contents, **and** the LMWOAs ~~**used were**~~ citric and oxalic acid.

BACTER

And an even tighter one

We investigated the impact of the low-molecular-weight organic acids, citric and oxalic acid, on the availability of phenanthrene and pyrene in two types of soil with different organic contents.