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Writing and Editing for Impact

A NORDP 2-Hour Workshop

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Learning Objectives

- Understand what makes a piece of writing effective.

- Understand approaches to achieve effective writing.

- Understand how to "diagnose" problems in writing.

- Understand specific approaches to fix those problems and improve the document's effectiveness.

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What is "Effective Writing"?

- "Effective" is more than just grammatically correct.

- Meets audience's needs and author's goals

- Tells an easy-to-follow story
  - Has identifiable characters – who are they and what are they doing?
  - Has a beginning, middle, & end

- Addresses the who, what, when, where, why, and how at each step, with cues and transitions

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What makes an effective grant?

- Convinces the reader that this is
  - An important problem to solve,
  - The right way to solve it,
  - The right team to do it, and
  - Valuable even if the answer doesn't turn out as expected.
- Therefore must be *persuasive* writing, not for entertainment or to be merely informative.
- 5 Cs: Clear, Compelling, Consistent, Complete, and Concise

Know your audience, meet their needs

- FOA and sponsor(s)
  - What is the intent or priority?
  - What is required, allowed, or not allowed (plans, format, etc.)
- Reviewers
  - Who are they, or what kinds of people might they be?
  - What might they already know or think they know?
  - What biases might they hold?
  - What do they need to know that you know?
  - What must they learn and in what order to be excited?

Stories are powerful persuasive devices….

What makes an easy-to-follow story?

- Goldilocks and the Three Bears…
  - "Starts" in just the right place for the audience, not too early or too late.
  - Uses parallel construction to organize information and allow the reader to anticipate content.
  - Uses cues and transitions (5Ws and H) to keep reader oriented.
  - Provides conclusions.
  - No surprises and no red herrings.

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Evaluating an application's story

- How is the "stage" set?
- How does the story proceed?
- Are the right characters in the right place doing the right things?
- Add "chapters" through use of headings and sub-headings.
- As a reader, do you get lost or confused?
  - What cues or reminders do you need? ("Meanwhile, back at the farm….")

Strengthening: Make every word work

- Simple sentences create stronger points.
- Cut the text in "half" and then in "half" again:
  - Identify and remove "fluff"
  - Evaluate prepositional phrases
  - Replace "almost right" words with the exact word
  - Identify and reduce redundancies and tangents
  - Consider reverse outline
- Say what you mean, and mean what you say.
- Creates space to share more of what the readers need to know.

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Strengthen: Meet "reader expectations"

- Action is in the verb.

- Subject reflects the "whose story is it?" or the "character(s)" involved.

- Sentences start with short reminders or cues.
  - George Gopen calls reminders "backwards links".
  - Transition words provide orienting cues.

- Important new information appears at the end of each sentence.
  - George Gopen calls this the "stress position"
  - Readers also emphasize information appearing before semicolon and colon, and at the end of each clause in a compound sentence.

An example – Item 1 in handout. Underline stress positions, circle "backwards links"

Focal and segmental glomerulosclerosis (FSGS) is a frequent cause of end-stage renal disease. The pathogenesis of FSGS has not been precisely defined with no consistently effective treatments. Recent studies identifying causal genes in rare forms of inherited FSGS have provided powerful insights into its pathogenesis that are also relevant to other forms of glomerular diseases. Genetic heterogeneity has been the precedent; mutations in at least six genes have been associated with familial FSGS.

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"Stress positions"

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"Backwards Links"

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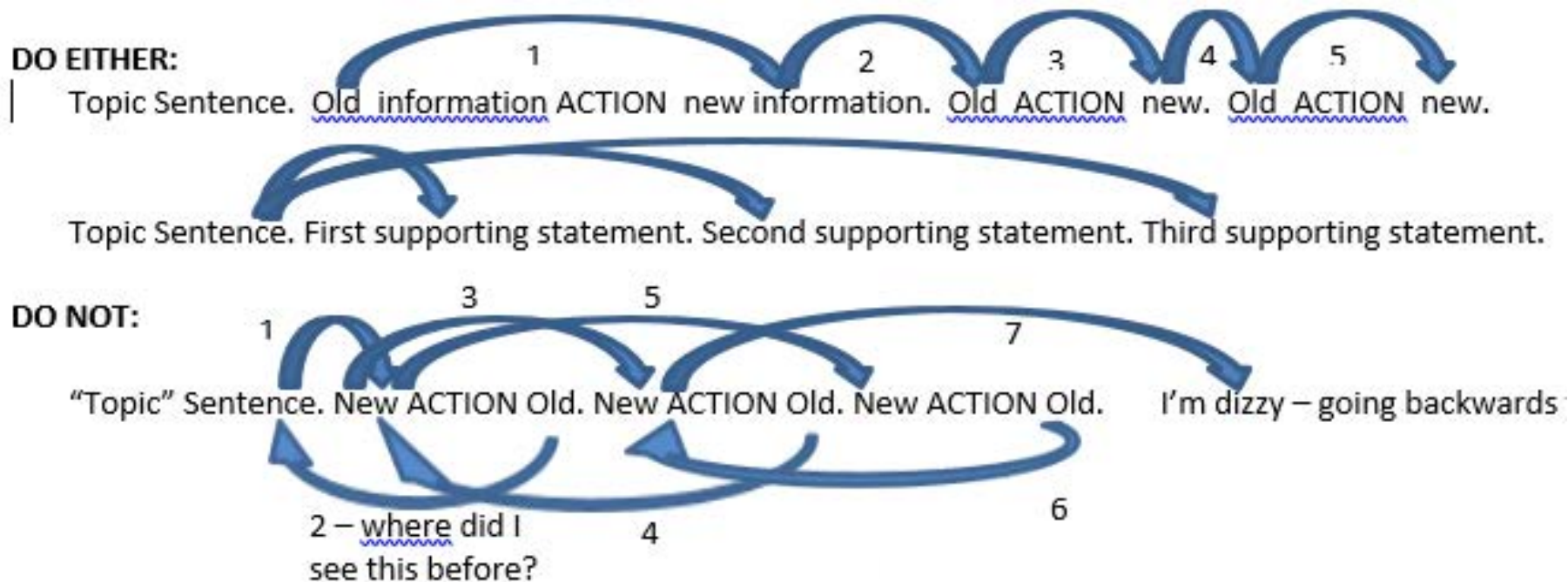
But….

- None of the "backwards links" refer to information in the stress positions.
  - And they are stretched – each "FSGS" is actually slightly different.

- None of the information in any stress position is referred to again.

- New information appears all over the place.

- By the end, no single expectation exists for what's coming next or what the project might be.

In handout (https://tinyurl.com/EditingImpact),
see page 11 for a revised version (Example 34).

Larger organizational expectations

- Two standard paragraph structures
  - Topic sentence followed by progressive statements
  - Topic sentence followed by distinct supportive statements

DO EITHER:

Topic Sentence. Old information ACTION new information. Old ACTION new. Old ACTION new.

1 2 3 4 5

Topic Sentence. First supporting statement. Second supporting statement. Third supporting statement.

DO NOT:

"Topic" Sentence. New ACTION Old. New ACTION Old. New ACTION Old.   I'm dizzy – going backwards

1   3   5   7

2 – where did I see this before?   4   6

Exercise: Where should/could these sentences lead? (Hint: either the first thing mentioned (the subject), or the last thing mentioned (the stress position))

Erectile dysfunction affects most men over 70 years of age and is considerably more common in men with diabetes.

In atherosclerosis, an insult to the endothelium stimulates an inflammatory response that causes infiltration of immune cells into the arterial wall and subsequent formation of foam cells.

The VA healthcare system is the largest US cancer care provider.

Thoracic and abdominal aortic aneurysms are largely treated by surgery due to a lack of pharmacologic agents targeting specific pathogenic mechanisms.

Chronic stress has significant effects on the brain, including on its morphology, pathology, and function.

Only two approaches have been proven to help reverse chronic stress's effects on the brain – aerobic exercise and mindfulness.

WARNING: Do not "Gopenize" sentences without carefully evaluating whether what's in the stress position is what NEEDS to be in the stress position! "Gopenizing" creates a path – make sure it's the right one!

Reviewers' reactions, author warnings

- You're making me do all the work / don't make reviewers work

- I don't believe you / show don't tell

- You don't need this money / be honest and show the right things (also: now is not the time to brag)

- Even if you had the money, the problem you've described sounds unsolvable / be honest and show the right things
  - Don't be overly dramatic about the challenge **and** overly humble about your capabilities

Now we know that effective writing….

- Meets the audience's needs and author's goals
- Tells an easy-to-follow story so the reader is persuaded
- Ensures that every word is doing a job
- Meets readers' expectations

So, how do we get there?

Revise, revise, revise!!

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Steps/Options for effective revision

- Cut the text in "half" and "half" again.

- Apply Gopen's approach (evaluate stress positions, backwards links, verbs; make sure the right ideas are in the right place and the sentences and thoughts are carefully linked).

- Diagnose barriers to effectiveness.

- Fix them!

Differential diagnoses for grants

1. Is it a scientific problem or a presentation problem?
2. If it's a presentation problem, what kind is it?
   - The argument seems weak or doesn't advance
   - You think "I can't even with this"
   - It seems "off-kilter" or imbalanced
   - Some/All of the above
3. If it's a scientific problem, is it ***really***?

Argument is weak or doesn't advance

- Fluffy
- Circular (sentence and paragraph level)
- Repetitive (section by section level)
- "Splat" (a George Gopen term)
- Tells rather than shows
- Word choices create uncertainty in reader
- Critical content isn't in the right place at the right time
- Cut & paste residuals

Handout:
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- Splat and others: Examples 1, 2, and 3
- Uncertainty: Example 4, 5, 14, 16, and 27
- Overly timid: Stories 6 and 7
- Right info, Right place: Examples 18 and 19
- Reader expectations: Example 28

"I can't even with this"

- Author comes across as arrogant or uninformed
- Problem as described comes across as insurmountable
- Researcher or team comes across as wannabes rather than the right group to solve the problem
- Overly flowery
- Overly technical
- If frustration is that reader doesn't ever seem to get anywhere, then weak argument problems (previous) may also exist.

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- Overly bold: Example 8

- Overly flowery: Example 10

- Overly technical: Example 16

- Naïve, insurmountable problem: Example 9

Heilmeier catechism

- (https://www.darpa.mil/work-with-us/heilmeier-catechism):
- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What is new in your approach and why do you think it will be successful?
- Who cares? If you are successful, what difference will it make?
- What are the risks?
- How much will it cost?
- How long will it take?
- What are the mid-term and final "exams" to check for success?

It seems "off-kilter" or imbalanced

- "Real estate" problem
- Misleading arguments or surprises
- Formatting/presentation at odds with intended message
- Logic gaps

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- Right info/real estate: Examples 18 and 19

- Misleading/surprises: Stories in 11, 12, and 13

- Uncertainty due to logic gaps: Example 20 and 22

Try it yourself!

- Easing into it: Examples 29, 30 and 31

- Next level: Example 32

- The mother lode: Example 33

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Some or all of the above…

- It's a "stinky onion"
  - Each read reveals another fundamental problem, and hence a new "layer" of problems to correct.
  - May make you want to cry.
- May reflect inaccurate/incomplete understanding of the audience.

Is there a deal-breaking scientific problem, or just misleading words/presentation?

- Lack of preliminary data to demonstrate feasibility
- Lack of collaborators with required track records or expertise
- Lack of capital-S "Significance"
- Aims are not achievable regardless of results
- Hypotheses are not testable, or not testable by the methods/aims
- Proposed/Described experimental approaches not rigorous
- Lack of an appropriate statistical analysis section
- Scope is too ambitious
- Scope is too narrow

Edit, Comment, or Both?

- Goal: Author confidently accepts all changes.
- Edit when you can defend your edit "in a court of law"
  - Don't just change – diagnose and fix.
- Mark with comment boxes any edit that changes the meaning, even if you're certain you are correct.
- Use comment boxes on the appropriate text
  - Flag edits that alter meaning.
  - Convey your thought process and offer solutions when you don't know the correct choice.
  - Convey your thought process and tell them what is needed when you don't know how to do it.
  - Ask questions when your understanding (i.e., from meetings or previous drafts) differs from what's stated.
- See pages 12-14 of handout for some examples.

Questions?

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