

Good Writing Practice

Inter-sentence discontinuity 2

Misplacement discontinuity and omission: Continuity markers



Introduction

This is the second of two articles on inter-sentence discontinuity. In this article, we consider the following examples of misplacement: Part 1, Results and Conclusion in the Introduction section; Part 2, Justification for Hypothesis and Hypothesis in the Materials and Methods section. Both are counter to the expectations of a reader in the profession who expects anticipated conceptual components to be in appropriate sections of a journal article, not because of rules but because of discontinuity to a developing argument.

Paragraph lengthiness and complexity without discernible continuity can be minimised by a forecast and a backtrack marker of the information pattern. Omission of forecast continuity markers (subheading, end-of-sentence;

Part 3) and backtrack continuity markers (determiners: definite article, indefinite pronoun, demonstrative adjective; Part 4) impede immediate comprehension.

Part 1 – Results and conclusion in the Introduction section

Example: Introduction section

Bacteriorhodopsin (bR), a photochromic protein in the purple membrane of the archaebacterium Halobacterium salinarium, is excited to a metastable state as light is absorbed, a metastable state that is characterised by a refractive index greater than that of the unexcited state. The dependence of the refractive index of bR on incident light intensity was reported for only relatively low intensities, substantially lower than

SECTION EDITORS



Wendy Kingdom

info@wendykingdom.com



Amy Whereat

amy.whereat@speaktthespeech.fr

the maximum laser intensities available. Consequently, we tested (by using a Z-scan technique) the behaviour of bR in response to high intensities. The results were that the refractive index is positive in response to low incident intensities, but the change becomes zero and then negative beyond a threshold intensity.

In conclusion, the results indicated the limitations of the previously accepted model for bR and provide a new model for greater potential uses (e.g., self-limiting filters, high-speed shutters).

In this example, the first sentence describes the pertinent background to the research problem, the second sentence describes the research problem, and the third sentence describes the objective. However, the remainder of the text (underlined) can be categorised as results and conclusion-consequence.

Revision

Bacteriorhodopsin (bR), a photochromic protein in the purple membrane of the archaebacterium Halobacterium salinarium, is excited to a metastable state as light is absorbed, a metastable state that is characterised by a refractive index greater than that of the unexcited state. The dependence of the refractive index of bR on incident light intensity was reported for only relatively low intensities, substantially lower than the maximum laser intensities available.

Consequently, we tested (by using a Z-scan technique) the behaviour of bR in response to high intensities.

Notes

Placement of results and conclusion in the Introduction section is an over-statement because these components would be stated in the

abstract and, of course, in the results and discussion section. Inclusion of results and conclusion in the Introduction section seems not only redundant to the Abstract (and “pre-dundant” to the Results and Discussion sections) but also, by such repetition, an overstatement. However, conceptual component misplacement is a less severe distraction than conceptual component omission because misplacement is a lack of organisation not an omission of essential information. (In both the example and the revision, the justification for the hypothesis and the hypothesis are missing between the research problem and the objective.)

Misplacement can be considered as the other side of omission; that is, placement of a conceptual component into an inappropriate section may result in an omission of the component in an appropriate section.

Part 2 – Hypothesis justification and hypothesis in the Materials and Methods section

Example: Materials and Methods section

It has become increasingly important to streamline occupational therapy intervention for patients who are experiencing shorter length of stays. The national average length of stay for a rehabilitation patient is between 10 and 12 days. Therefore, a family and/or caregiver education is paramount for safe discharge to the home setting. This study involved a convenience sample of 10 patients over a 6-week period in the acute rehabilitation unit of a hospital (IRB was obtained prior to initiating the study). The patients were a combination of men and women who had a variety of physical disabilities (e.g., CVA, TBI, SCI). Exclusion criteria were moderate-to-severe cognitive, auditory, and visual deficits.

In this example, the hypothesis justification and hypothesis are included in the Materials and Methods section, whereas this information should have been included in the Introduction.

Revision

This study involved a convenience sample of 10 patients over a 6-week period in the acute rehabilitation unit of a hospital (IRB was obtained prior to initiating the study). The patients were a combination of men and women

who had a variety of physical disabilities (e.g., CVA, TBI, SCI). Exclusion criteria were moderate-to-severe cognitive, auditory, and visual deficits.

Notes

There is no need to repeat in the Materials and Methods section conceptual components from the Introduction. Although it is not uncommon to forget that each section of the journal article is part of a continuum, readers of journal articles respond negatively to repetition between sections as an indication of author lack of discipline.

Part 3 – Forecast markers

Here we look at two examples of discontinuity resulting from omission of a forecast marker.

Example 1 (Subheading): Materials and Methods section: method

At the Chilao study site (San Gabriel Mountains, California), after soil temperature measurement (LaMotte Chemical dial thermometer), small samples of soil (2 m intervals) were collected (trowel), placed into a bag, dried, and mixed. A few tablespoons of soil were dried (to the nearest ounce), heated (4 h, 550°C), reweighed (25°C), and the amount expressed as a percentage of total weight.

A LaMotte Deluxe TurfLab Soil Kit (Model TL-2) was used to determine the following: nitrate nitrogen (mixed acid reagent and nitrate reducing reagent); phosphorus (NF extracting solution and charcoal suspension); potassium (K solution); iron (iron reagent #1 and #2); calcium and magnesium (Schwarzenback EDTA titration method). Nitrate, phosphorus, and iron were measured colorimetrically.

Revision

Collection and processing – At the Chilao study site ... [paragraph continues as above].

Chemical analyses - A LaMotte Deluxe Turf Lab Soil Kit ... [paragraph continues as above].

Notes

In the example, the omission of in-text subheadings renders the shift inexplicit from one research activity (collection and processing) to another (chemical analyses). Continuity between dense paragraphs consisting of different types of

information can be made explicit by use of subheadings.

Example 2 (end-of-sentence appositives): Introduction section: research problem pertinent background

To obtain the best performance from processors, two essential assistants can be considered. The compilers maximise the parallelisation and balance workloads. The interconnects among clusters are another requirement for improving the processor performance by overcoming the partitioning overhead as inter-cluster communications.

Revision

*To obtain the best performance from processors, two essential assistants can be considered: **compilers and interconnects among clusters**. The compilers maximise the parallelisation and balance workloads. The interconnects among clusters are another requirement for improving the processor performance by overcoming the partitioning overhead as inter-cluster communications.*

Notes

Forecasting the assistants (compilers and interconnects among clusters) as appositives at the end of the first sentence provides explicit continuity to the second and third sentences.

Part 4 – Backtrack markers

In addition to functioning grammatically as a marker of uniqueness, the definite article *the* denotes that a noun was previously mentioned and, thus, known to the reader and author. The definite article thus functions as a marker of continuity, intra- and especially inter-sentence. A continuity gap can occur if the definite article or a stronger type of determiner is missing. In this section, examples are arranged as a noun pre-mentioned in a contiguous sentence (Example 1); and a noun pre-mentioned in a previous section (Examples 2 and 3).

Example 1 (the and such in a contiguous sentence): Introduction section: research problem pertinent background

Bacteria can spread quickly from the cavities to the apical through the straight root canals of baby teeth, resulting in infected bone and periodontal tissue. Infection will impair craniofacial development.

Revision 1

Bacteria can spread quickly from the cavities to the apical through the straight root canals of baby teeth, resulting in infected bone and periodontal tissue. The infection will impair craniofacial development.

Revision 2

Bacteria can spread quickly from the cavities to the apical through the straight root canals of baby teeth, resulting in infected bone and periodontal tissue. Such infection will impair craniofacial development.

Notes

Some continuity is provided by echo of the word *infection*, which fills the continuity gap between the first and second sentence. In Revision 1, further continuity is provided by *the*. In Revision 2, the indefinite pronoun determiner *such* renders the continuity explicit. Usage of the determiner *this* would be a little less emphatic, and *the* would be even less so. Thus, there seems a hierarchy of determiner-elicited continuity emphasis: *such* > *this/that* > *the*.

The subject of a sentence is often preceded by

the definite article *the*, maybe because the subject position is the site for known information and the predicate site for new information.

Example 2 (the for an antecedent in a previous section): Materials and Methods section

Three hepatoma cell lines were used in this experiment.

Revision

The three hepatoma cell lines were used in this experiment.

Notes

Without *the*, it would seem that *three hepatoma cell lines* is mentioned for the first time, forgoing not only their prior mention but their importance in context.

Example 3 (many of the for antecedents in a previous section): Materials and Methods section: method

Many studies were performed in vitro.

Revision

Many of the studies were performed in vitro.

Notes

Without *of the*, there is no denotation that all of the studies were previously mentioned. *The* used alone as in *many the* is unconventional. Other determiners that require *of* are *none* and *some*. In contrast, *all the* sounds conventional, but *all of* would be consistent with all of the others.

Summary

The misplacement of a conceptual component from one section to another will be viewed as redundant over-emphasis – not without value in a grant application, but distracting in a journal article.

Omission of forecast or backtrack markers decreases paragraph continuity, resulting in impeded immediate comprehension.

Michael Lewis Schneir, PhD
Professor, Biomedical Science
Ostrow School of Dentistry
University of Southern California
Los Angeles, CA, USA
schneir@usc.edu



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