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 photochomic protein in the purple membrane of the archebacterium 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. 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 photochomic protein in the purple membrane of the archebacterium 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. 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: 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.

Revision

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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 sentence (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.

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Save the date
The 47th EMWA Conference in Warsaw, Poland
November 8–10, 2018
For more information:
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