

Good Writing Practice

Syntactic number distraction

Circumlocution: Pre- or post-noun modification



Introduction

Excessive post-noun modification, usually as adjectival prepositional phrases, occurs frequently in research writing. Occurring less frequently, and less distracting, is excessive pre-noun adjectival modification (i.e., stacked modification). The post-noun adjectival modification often occurs after a noun functioning as an object of an adverbial prepositional phrase.

Experimental sections

Part 1 – Materials and methods section: Method

Example: excessive post-noun modification

Cells were washed twice with 1 x PBS and isolated by centrifugation for 6 minutes at 1600 rpm.

Revision

Cells were washed twice with 1 x PBS and isolated by centrifugation (**6 min, 1600 rpm**).

Notes

The tandem post-noun prepositional phrases are details of centrifugation. Such secondary level information can be demarcated from primary by using parenthesised noun phrases. Even the details of washing could also be so reduced to the noun phrase (*1 x PBS*).

In the Revision, *minutes* can be abbreviated to *min*, which lacks plurality and punctuation. Furthermore, deletion seems to prompt deletion; that is, with the deletion of the prepositions and abbreviation of the units, *isolated by centrifugation* seems a circumlocution of simply *centrifuged*. The verbs in the sentence are now parallel: *were washed ... and centrifuged*.

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Part 2 – Materials and methods section: Materials

Example: excessive post-noun modification

The sample from the University of North Carolina two-phase randomised clinical trial comprised preadolescent children with increased overjet (>7 mm), in mixed dentition, a year before peak pubertal growth, and without previous orthodontic treatment.

Revision

The sample was from the University of North Carolina two-phase randomised clinical trial. The inclusion criteria were (1) preadolescent children a year before peak pubertal growth, (2) increased overjet (>7 mm), (3) no previous orthodontic treatment.

Notes

In the Example, a series of four prepositional phrases conveying primary information is torturous to comprehend in contrast to a numerical listing of noun phrases in the Revision. The enumerated listing facilitates comprehension, a facilitation that is further enhanced by combining related criteria. Furthermore, such information insight enables in mixed dentition to be self-evident for children of that age.

Part 3 – Results section: Data-based observation

Example: unnecessary post-noun modification

Skeletal muscle hypertrophy was accompanied by an acceleration of protein synthesis and an increase of A1B uptake.

Revision 1

Skeletal muscle hypertrophy was accompanied by **accelerated** protein synthesis and **increased** A1B uptake.

Revision 2

*Skeletal muscle hypertrophy was accompanied by **increased** protein synthesis and A1B uptake.*

Notes

In the two sets of tandem prepositional phrases, not only do the nouns *acceleration* and *increase* add to noun density and abstraction, but their presence each necessitates a contiguous preposition: (*acceleration of; increase of*). Revision 1 involves syntactic reduction of a prepositional phrase into the adjectival past participles *accelerated* and *increased*. In Revision 2, with the deletion of the preposition and the article, the subtle distinction between *accelerated* and *increased* becomes unintended.

Part 4 – Results section: Data-based observation

Example: excessive pre-noun modification

Extremely low birth weight infants were the primary occupants of the neonatal critical care unit.

Revision

*Extremely **low-birth-weight** infants were the primary occupants of the neonatal critical care unit.*

Notes

Three coordinated adjectival pre-modifiers will be mildly distracting to an expert in the discipline, but more so for a non-expert. In the Revision, virtual unstacking is accomplished by hyphenation, which unites the three modifiers so that they function as one unit. *Low* is an adjective, but *birth* and *weight* are nouns functioning adjectivally. Thus, the three pre-modifiers are adjectival in function. The fourth modifier *extremely*, probably a cumulative modifier (i.e., modifies *low-birth-weight*), as most *-ly* adverbs, is usually not hyphenated.

Contextual sections

Part 1 – Introduction section: Research problem pertinent background

Example: excessive post-noun modification

The inter-compartment heterogeneity, such as posterior expression of Notch, Serrate, and Wnt 7a, and anterior expression of BMP-4 and Tenascin, results in an A-P asymmetry within the feather buds.

Revision

The following examples of inter-



*compartment heterogeneity result in an A-P symmetry within the feather buds: posterior expression (**Notch**, **Serrate**, and **Wnt7a**) and anterior expression (**BMP-4** and **Tenascin**).*

Notes

The examples of posterior and anterior expression are secondary information, which can be syntactically reduced from prepositional phrases into parenthesised noun phrases.

Part 2 – Introduction section: Research problem pertinent background

Example: excessive post-noun modification

During tooth morphogenesis, Syndecan-1 expression is essential for the condensation of dental mesenchyme.

Revision 1

*During tooth morphogenesis, Syndecan-1 expression is essential for **dental mesenchyme condensation**.*

Notes

In the Example the two contiguous post-noun prepositional phrases can be syntactically melded. The Revision is accomplished by transposition of the object *dental mesenchyme* of the second prepositional phrase into a pre-noun modifier (*dental mesenchyme*) of the object of the first prepositional phrase. Thus, melding reduces the tandem prepositional phrases into one.

Part 3 – Introduction section: Research problem pertinent background

Example: excessive post-noun modification

Orthopaedic surgeons are setting arbitrary restrictions on the return to activities, with the intent of protecting the graft from injury.

Revision 1

*Orthopaedic surgeons are setting arbitrary restrictions on the return to activities **to protect** the graft from injury.*

Revision 2

***To protect** the graft from injury, orthopaedic surgeons are setting arbitrary restrictions on the return to activities.*

Notes

The tandem prepositional phrases *with the intent of protecting* is narrative and wordy. In Revision 1, the infinitive phrase *to protect* can be used to convey intent. Repetition of

the preposition *to* is redundant with the infinitive marker *to*, which is resolved by transposition of the infinitive phrase to the sentence start position.

Part 4 – Introduction section: Objective + experimental approach

Example: excessive pre-noun modification

Angiopoietin regulation of choroidal endothelial cell MM-P and MM-9 activities was investigated by gelatin zymography.

Revision

*Angiopoietin regulation of MM-P and MM-9 activities **in choroidal endothelial cells** was investigated by gelatin zymography.*

Notes

There are five pre-modifiers before *activities* that impede comprehension. Transposition of *choroidal endothelial cells* into a post-noun position separates the type of activities from their location and provides a balance between the number of pre- and post-modifiers, a balance that enhances comprehension.

Summary

The distribution of the two examples of excess pre-noun modifiers and the six examples of post-noun modifiers is equal between Experimental sections (Results) and Contextual sections (Introduction). The rhetorical severity of these examples is dissonance and possibly impeded comprehension. Revision of excess pre-modifiers can range from hyphenation (whereby the pre-noun modifiers are visually transformed into one unit) to transposition (whereby a pre-modifier is transposed to a post-modifier). In contrast, revision of post-modifiers involves a variety of syntactic options: melding of tandem appositives; parenthesis or listing (both of which involve syntactic reduction of a prepositional phrase into a noun phrase), or conversion into another syntactic unit (e.g., infinitive phrase).



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