Simplifying meaning vs. deepening understanding: handling terminology in scientific English editing

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Purposes of simplification

- To help initial comprehension
  - Information is sometimes removed
- To deepen understanding (to explain)
  - Education (and research?)

For the general public (to inform, to grab attention)
  - Information can be removed or even changed

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Text simplification in scientific English editing

- Author and reader expected to have same academic level

- So, is this simplification?

Some examples of typical changes:

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Examples of revisions

- Reordering of a sentence or paragraph for emphasis
- Splitting of a sentence for clarity (parsing; 3-line limit)
- Word replacement for grammar (e.g. that/which)
- Addition or removal of articles for grammar (differences in usage between languages)
- Term replacement for 'faux amis' (e.g. control, eventually in French-speakers' English texts)
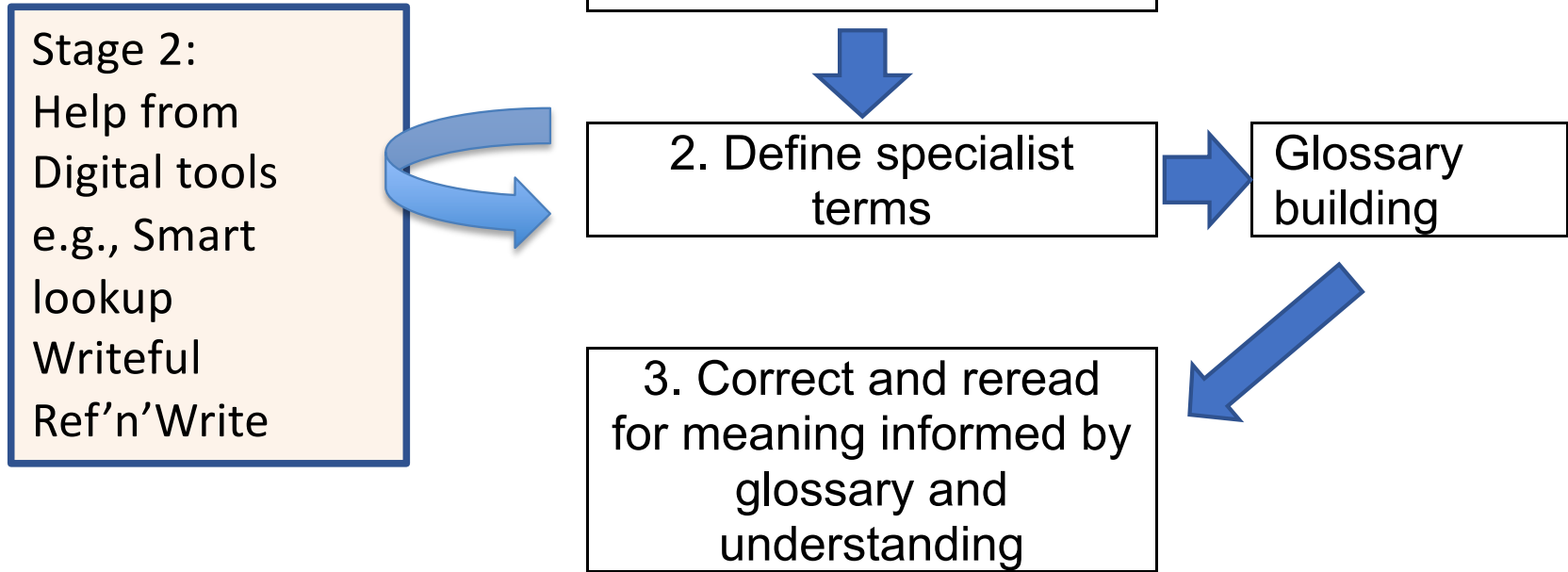
- Specialist terms specific to a field…

Is correction-revision a type of simplification?

– No
  • Because of the target audience has the same academic level as the author

– Yes
  • Complexity of sentences written by non-native English speakers (breaking down for clarity)
  • Need for reviser to understand the meaning as part of the work (simplification as an intermediate step)

Correction-revision – the problem:
the reviser themselves is a novice

– Technical texts with English errors

- Lexical and syntactic aspects

- Untangling technicity from errors

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Correction revision workflow with digital aids

Present workflow

Stage 2:
Help from
Digital tools
e.g., Smart
lookup
Writeful
Ref'n'Write

1.Read for terms & correct English, except where there is interference

2. Define specialist terms

Glossary building

3. Correct and reread for meaning informed by glossary and understanding

Correction-revision – present strategies

- Integrated internet search tools:
  - e.g. Word + 'Smart lookup', Google, Termium etc.
- Bibliography and context-based
  - Ref 'n' Write, Writefull
- Home-made glossaries

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1. Introduction

Food webs are composed of complex interactions and energy links among species and the environment (Thompson et al., 2012), creating ecosystems (complex systems) whose functioning is difficult to comprehend. Models try to replicate the major characteristics of the original system to resemble reality and, at the same time, are simple enough to be understood, being crucial in the clarification and understanding of this complexity (Brown et al., 2004).

Among the ecosystem models, the Ecopath-Ecosim (EwE), and EcoTroph (Christensen et al., 2005; Gascuel, 2005) constitute a globally applied tool for modeling aquatic ecosystems (Colléter et al., 2015). The EwE approach describes the ecosystem resources and the interactions among different ecological groups, identifying and

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and track disciplines (1,2,3). The maximal power output in cycling is described by a polynomial

2nd order power-pedaling rate relationship with a peak maximal value (P_{max}) reached at an

optimal pedaling rate (V_{opt}) and an optimal torque (T_{opt}) (1,4,5,6). This means that athletes' P_{max}

theoretically depends on both their "strength" and "velocity" capacities. Although some authors

have reported a significant relationship between P_{max} and V_{opt} in heterogeneous populations

(7,8), such a relationship was not observed in a population of male elite track sprint cyclists (1).

However, regardless of training status and population, a strong relationship between P_{max} and

T_{max} or T_{opt} is consistently observed (1,9), suggesting that the capacity to generate a high torque

at the crank remains the main determining factor for maximal power output (1,9).

The capacity to generate maximal torque in cycling is classically associated with the torque-

generating capacities of the main lower-limb extensor muscle groups (6,10). For example, Driss

et al. (11) reported a strong positive correlation between maximal cycling torque and the peak

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Ref-n-Write

SEARCH

PANEL 1 | PANEL 2 | EXPAND

The crank **torque** represents the kinetics of the propulsive **torque** (N m) within the crank cycle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

The external **torque** produced was calculated as the sum of the frictional **torque** (given by the strain gauge) plus the **torque** necessary to accelerate the flywheel [14,23,32].(Doreletal.2005IJSM) (...) (≡)

They correspond to the intercept of the **torque** - velocity curve with the velocity and **torque** axes, respectively.(Doreletal.2005IJSM) (...) (≡)

In this study the DPtop was the crank angle when the **torque** was minimal in sector 1 (left crank arm near top position 315–45) while **torque** at DPtop represented the **torque** value at this crank angle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

The DPbot was the crank angle when the **torque** was minimal in sector 3 (left crank arm near bottom position 135–225) while **torque** at DPbot represents the **torque** value at this crank angle. (Effect on the crank torque profile when changing pedaling cadence in level ground and uphill road cycling) (...) (≡)

The linear re lationship obtained between **torque** and pedalling rate enables assessment of f 0 and T 0, which have the dimensions of maximal pedalling rate at the zero **torque** axis and the **torque** correspond ing to a zero pedalling rate, respectively (Fig 1).(Doreletal.2005IJSM) (...) (≡)

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Writefull

"undiagnosed"

"undiagnosed" appears **353,000** times in *Google Scholar*.
BOOKS   NEWS   WEB

No examples were found in our sentence database.

"non-diagnosed " appears **5,580** times in *Google Scholar*.
BOOKS   NEWS   WEB

No examples were found in our sentence database.

"negative affects" appears **6,820,000** times in *Google Scholar*.
BOOKS   NEWS   WEB

No examples were found in our sentence database.

comorbidities appears **1,250,000** times in *Google Scholar*.
BOOKS   NEWS   WEB

postal code of residence and the number and type of **comorbidities** at the time of admission. Comorbidities coded as complications were not included since these m

Second World War (WW2) veterans suffer post-traumatic stress disorder (PTSD) and its associated **comorbidities**

: Information on diabetes duration was abstracted from patient medical charts. **Comorbidities** : Information on the number and severity of comorbidities was abstracted from patient charts and

10 E. Hanover, NJ 07936, USA ABSTRACT Alzheimer's disease (AD) is often associated with multiple **comorbidities** and subsequent polypharmacy. Treatment of AD with acetylcholinesterase (AChE

longer than the national average. Associated with this were different numbers of **comorbidities** and disease patterns for identical DRG. While 96% of non-Aboriginal children had one or no co-

would consider for patients with speci®ed blood pressures and **comorbidities** . Practice questions pertained to hospital aliation, practice caseload, prevalence of hyperten
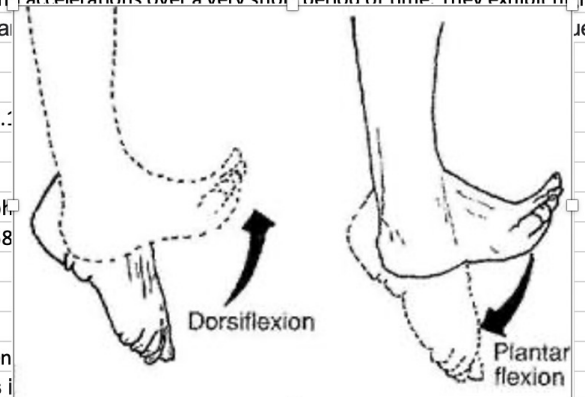
SEE MORE   DEFINE

generates chronic pain conditions appears **0** time in *Google Scholar*.

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	A	B	C
1	Term	definition/validation	source
2	a P_{max} cycling sprint	word order ok	
3	afferent	Oxford: conducting or conducted inwards or towards something (for nerves, the central nervous system; for blood vessels, the organ supplied).	
4	afferent fibers groups III and IV	accepted lingo	https://www.researchgate.net/publication/272100725_Group_III_and_IV_Muscle_Afferents_Role_on_Central_Motor_Driv
5	**altered synergistic control**	ok	https://www.sciencedirect.com/science/article/abs/pii/S0021929019303148
6	ballistic contractions	WP:Ballistic movement can be defined as muscle contractions that exhibit maximum velocities and accelerations over a very short period of time. They exhibit high fi
7	bi-articular muscles	**Bi-articular muscles** are commonly found in the upper and lower extremities of the huma
8	biofeedback of the torque signal	**ok**	
9	classical bipolar surface EMG	ok. Some use traditional	
10	classical torque-velocity test	See site for desc	https://journals.physiology.org/doi/full/10.
11	collected from/in participants	from is more comon	
12	common construct	ok for muscles	https://pubmed.ncbi.nlm.nih.gov/22987697/
13	common drive	author sometimes uses as uncountab	https://journals.physiology.org/doi/abs/10.1152/japplph
14	**common neural command**	ame message, different muscle	https://journals.physiology.org/doi/full/10.1152/jn.0068
15	contraction modalities	ok	
16	contralateral (ground electrode) and ipsilateral ankle	the part of the ankle	
17	converging onto the motor neuron pools	"on the neuron" is used	
18	convolution kernel compensation algorithm	https://www.researchgate.net/publication/220848255_Gradient_Convolution_Kernel_Compen
19	convolutive blind source separation method	**It is a thing but most examples I have found come from audio signal separation. Is i**
20	convolutive kernel compensation method	A method of breaking down the data	https://ieeexplore.ieee.org/document/8474306
21	cortical signature	most images are brain scans. It might be broader.	
22	corticospinal track	WP: The **corticospinal tract** is a white matter motor **pathway** starting at the cerebral cortex that terminates on lower motor neurons and interneurons in
23	crank angular velocity	word order OK	
24	crank length	Connects pedal to gears	
25	cross-pollination (of research)	in use	https://www.researchgate.net/post/Does_anyone_have_any_examples_of_cross_pollination_of_ideas_leading_to_a_break
26	cycle ergometer.	See site for desc	https://journals.physiology.org/doi/full/10.1152/japplphysiol.00719.2017

Dorsiflexion / Plantar flexion

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Conclusion

- A revisor needs to inform themselves of terminology and turns of phrase specific to a subject
- This is not simplification *per se* but requires a stage of simplification
- The tools exploited indicate ways to faciliate comprehension of specialised texts by non-specialist readers

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