The style files

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Explicitly avoid false conditionals

An infestation of termites is weakening mathematical writing. We all too often resort to wishy-washy conditionals such as 'can be' or 'wish to' hidden within the body of sentences. Just as termites weaken a building, these conditionals erode writing by turning what should be definite statements into weak conditionals. Get rid of them. If in your analysis or computational experiments you do something, then say so definitely; if not, say that; be explicit.

> There's almost no more beautiful sight than a simple declarative sentence.
>
> Zinsser

Eliminate indefiniteness. The following five examples show how you may make statements more explicit. Eliminating 'can be' is the most common improvement.

Weak: This paper shows how a similar increase in accuracy can be obtained, with a little more effort.

Definite: This paper shows how to obtain, with a little more effort, a similar increase in accuracy.

Weak: A correction factor can be applied and this brings the corrected M-functional very close to the quantiles.

Definite: Applying a correction factor brings the corrected M functional very close to the quantiles.

The following example eliminates two unnecessary qualifiers in making one definite statement.

Weak: The method can be applied to variety of problems in such areas as antiplane strain in elastostatics.

Definite: We apply the method to antiplane strain in elastostatics.

Being definite and explicit extends to acknowledgements: if you would like to thank someone, then do so.

Weak: I would like to thank . . .

Definite: I thank . . .

Avoid over conditioning. Sometimes writers overload a sentence or phrase with multiple conditionals. One genuine conditional is enough.

Weak: "where occasionally requests for function values may not be met"

Definite: either "where requests for function values may not be met" *or* "where occasionally requests for function values are not met"

> Lucid writing and speaking are highly explicit. The need for explicitness is more important than is commonly recognized by novice communicators, and its neglect far more expensive.
>
> McIntyre (2005) [2]

Higham (1998) [1], §4.17, also advises against the false 'If'. That is, the use of 'if' when we are not actually making a conditional statement.

False: If we look at the inlet velocity profile, it returns $U = 0.285\,U_0$.

Definite: The inlet velocity profile has $U = 0.285\,U_0$.

False: If we define the norm $\|\vec{p}\| = (\sum_i p_i^2)^{1/2}$, we would like to establish sufficient conditions to ensure boundedness.

Definite: Defining the norm $\|\vec{p}\| = (\sum_i p_i^2)^{1/2}$, we proceed to establish sufficient conditions to ensure boundedness.

Remember. After drafting an article, search through your source for "can be" and delete almost all of them. Similarly omit other weakening conditionals like the other examples above.

> *Make definite assertions. Avoid tame, colorless, hesitating, non-committal language.*
>
> Strunk, Jr (1918), [3], §12

References

[1] N.J. Higham, *Handbook of writing for the mathematical sciences*, 2nd edn (SIAM 1998).

[2] M.E. McIntyre, *Lucidity principles in brief*, technical report. http://www.atm.damtp.cam.ac.uk/people/mem/lucidity-in-brief/.

[3] W. Strunk Jr, *The Elements of Style*, W.P. Humphrey http://www.bartleby.com/141.