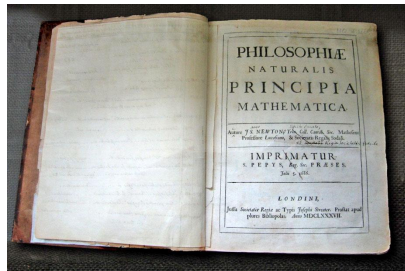


## Common Latin Terms in Scientific Writing— *What They Mean When to Use 'em*



Newton's own first edition of *Philosophiæ Naturalis Principia Mathematica*, showing his handwritten corrections for the second edition. Photograph © Andrew Dunn, <http://www.andrewdunnphoto.com/>

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**“i.e.” (*id est*) means “that is”  
or “in other words”**

**Use to define, restate, or paraphrase the  
clause immediately preceding it**

**“The table includes only those costs  
that fall under the NSF “Total Project  
Cost” category; *i.e.*, it does not include  
the significant contributions being  
provided by all members of the  
collaboration and the PSI laboratory.”**

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**“e.g.” (*exempli gratia*) means  
“for example”**

**Use to give an illustrative example of the  
thing just mentioned**

“This phenomenon may indicate trapped magnetic flux moving in the junction area or could indicate an intrinsic origin, such as domain wall motion between regions of different chiralities (**e.g.**,  $p_x^+ ip_y$  and  $p_x^- ip_y$ ).”

3

3

**“viz.” (*videlicet*) means “namely”\***

**Use to introduce specifically the items  
comprised by a previously expressed whole**

“The noble gases, **viz.**, helium, neon, argon, krypton, xenon, and radon, are a group of six gaseous chemical elements constituting Group 18 of the periodic table.”

**\*Few writers use viz. nowadays, but now you  
know what it means**

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### ***i.e. or e.g. or viz.?***

To restate an idea in a slightly different way  
and include *all* elements—use ***i.e.***

To give a few representative examples of  
something—use ***e.g.***

To specify the constituent parts of a  
previously named whole—use ***viz.***

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### **“vs.” (*versus*) means “against”**

**Use to contrast one thing against another**

“The critical current modulation **vs.** applied  
magnetic flux are shown for both  
configurations for phase shifts of 0 (*s*-wave)  
and  $\pi$  (*d*-wave).”

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**“etc.” (*et cetera*) means “and so forth”**

**Use sparingly; it is imprecise and usually adds nothing to the sentence**

“Flooding was caused by several factors (e.g., low grade, cutbanks, high water table, ~~etc.~~).”

**“et” means “and” in Latin; writing “and etc.” makes you sound like an ignoramus\***

*\*Lat. “we do not know”*

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**“et al.” (*et alii*) means “and others”**

**Use exclusively to denote additional authors in reference citations**

“The work of Jones **et al.**<sup>1</sup> established the scaling law used to benchmark the present experiment.”

**Note that “et” is *not* followed by a period, because it is not an abbreviation; “al.” is an abbreviation**

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**“N.B.” (*nota bene*) means “note well”**

**Use to call attention to a point**

**“N.B.** Stringent clean-room procedures must be employed to avoid contaminating the samples.”

**Unlike most abbreviations from Latin, “N.B.” is always capitalized**

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**“cf.” (*conferre*) means “compare with”**

**Use to point out similarities or differences of the thing presently being discussed to another example**

**“The diffusive model of microwave propagation within a building makes very accurate predictions for the amount of power that is received at a given point (cf. experimental results reported by Ullmo and Garanger [3]).”**

**Does *not* mean “refer to”—a common misuse of the term**

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**“q.v.” (*quod vide*) means “which see”**

**Use to point to a reference or another example**

**“Strongly interacting or “correlated” electrons cannot be described as embedded in a static mean field generated by other electrons [1]. (For an earlier review of fermionic correlations, **q.v.** *Rev. Mod. Phys.* 50, 99 [1984].)**

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**Latin *abbreviations* (not “et”)  
are always followed by a period (.)**

**i.e.**

**e.g.**

**viz.**

**N.B.**

**cf.**

**et al.**

**q.v.**

**Common Latin abbreviations are not italicized in scientific writing**

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**Latin words and phrases *are* usually italicized (as are any “foreign” words)**

***in situ* = in its original place**

***in vivo* = occurring only in a living body, i.e., not under laboratory conditions**

***in vitro* = in an artificial environment outside a living body (literally, “in glass”)**

***ab initio* = from first principles; predictions or calculations based entirely on theory**

“Fig. 3. (a) Side and (b) top view schematic for a SET on SOI substrate utilizing self-ordered 2D dopant patterns fabricated *in situ* by STM.”

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## **Commas and Latin terms**

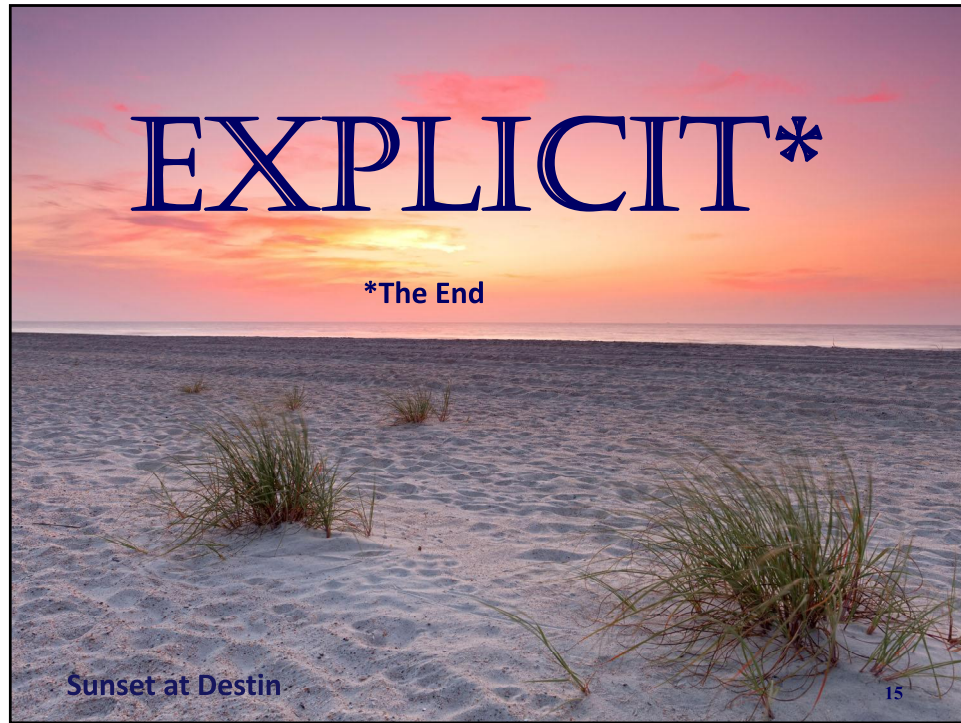
**Set off etc., e.g., i.e., and viz. with preceding and following commas**

“Formed by the breakup of meteors entering Earth’s atmosphere, the sodium atoms in the layer absorb and then re-emit some of the light, which appears to an earthbound telescope as an artificial magnitude 7 star (a factor of 100 weaker than, e.g., Polaris, a magnitude 3 star).”

**Do not use commas after cf., et al., or q.v.**

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