

A) Strategic writing problems

A1: Don't make statements that are unnecessary for your argument, but could be questioned.

Example: "The **two most** classic games to simulate the behavior of animals are the Hawk-Dove game and the Prisoner's Dilemma." -> someone else might disagree. Is it really important to be so definite here? Why not say: Two classic games?

A2: Passive / Active: See my comments in the lecture notes on scientific writing. In general you should write in an active voice, unless 1) Sentence structure C3 takes precedence 2) the thing you talk about is impersonal, was done by another person. More details in my lecture notes. In particular, opinions of your own SHOULD be active.

A3: The Yoda rule – there is no try, do it. Phrases like: "we attempted to find whether there is", "this study aims at" sound weak and defensive. Write "we studied whether ..."

B) Logical problems

B1: The stated implication does not follow logically from the argument. Example: "**Because** both models follow different payoff schemes, it is important to know how a simulation model reacts to different settings." → Unclear why it is important to know how simulation reacts to different settings if two models are different

B2: "Micrologic": logical indicators such as "thus", "hence", "however", "nevertheless" have a clear meaning. "thus", "hence" indicate an implication. "however", "nevertheless" indicate contradicting statements or evidence to the previous proposition.

C) Style

C1: Drop redundant words: Any of the following words can be erased: "**a total of** n subjects", "the simulations were run with the **exact** same parameter set as before"

C2: Pompous / pontificating style: if something can be said in simple words, it should be said in simple words. Worse: if the only purpose of a sentence is to "sound scientific", it should not be said at all. Examples: do you really have to "**utilize**" a method instead of "**using**" it? Do you have to do the analysis by "**using the model in an integrated framework to facilitate a holistic forecast**" instead of "**predicting from the model**"? Read Woodford, F. (1967) *Sounder thinking through clearer writing. Science, 156, 743.*

C3: Topic position / Stress position not properly occupied: The first part of a sentence should give the context. The last part of the sentence should provide the crucial new information, and should relate to what is further discussed. Read Gopen, G. D. & Swan, J. A. (1990) *The Science Of Scientific Writing. Am. Sci., 78, 550-558.*

C4: Paragraph structure: A paragraph structures the text into topical units. Use them! Each paragraph should introduce its topic in the beginning, and ideally lead to some conclusion or summary at the end.

C5: Unnecessary adjectives. Mark Twain: *“As to the adjective: when in doubt, strike it out.”* Especially adjectives such as “very”, “particularly” are often not necessary. Applies also to larger constructs such as *“Evolutionary Game Theory **is an important tool to** investigate ...”* – if you erase the underlined text, the sentence remains fine.

C6: Unclear / ambiguous expressions. Write as clear and as informative as possible. Avoid ambiguous words like “tends to”, “mostly” etc. if you can make a definite statement. Example: “the frequency of cooperators always **tends** to be zero” → what does that mean? 1) It was always zero 2) It was zero in 95 % of the cases 3) something else

D) Grammar and spelling

D1: Commas: read <http://www.grammarbook.com/punctuation/commas.asp>

G) Other general observations:

G1: In the abstract, nearly all essays started with a (mostly too long) description of what EGT is, but then failed to give a reason for why one would like to study spatial structure.

G2: Results are different to the paper, but you state they are the same

Word choice

use vs utilize → prefer use http://en.wiktionary.org/wiki/utilise#Usage_notes