

Dear Harrie-Jan Hendricks Franssen

Thank you for the time invested in our paper. We have fixed the technical issues with the COBLIS and supplement material (point 1 and 2) and replied to the second reviewer. The changes are easily tractable in the track changes file.

Best

Evgany and Yaniv

1. COBLIS - all plots were run through COBLIS and updated accordingly to allow correct interpretation by readers with various sight deficiencies.

2. Supplement was updated in accordance with:

1. Supplements will receive their own DOI (digital object identifier) and will be published online along with the article as *.zip archive or single *.pdf file.
2. Supplements will receive a title page added during the publication process including title ("Supplement of"), authors, and the correspondence email. Therefore, please avoid providing this information in the supplement.
3. Equations, figures and tables in supplements should be numbered as (S1), Fig. S5 or Table S6. Sections are numbered as S3, S3.1, and S3.1.1.
4. The overall file size of a supplement is limited to 50 MB. Authors of larger supplements are kindly asked to submit their files to a reliable FAIR-aligned data repository and to insert a persistent identifier, ideally a DOI, in the manuscript.

Reviewer 2:

I disagree with the internal and external entropy adding up to zero. The Shannon entropy is just a small part of the total entropy, most of it being in the molecular chaos. This molecular entropy is continuously being produced and shed to the surroundings as heat. The Shannon cannot balance it.

Reply by authors:

We accept the reviewer comment and acknowledge that there are additional processes that may affect the entropy. As such, the formulations regarding the thermodynamic context of the BTC - transport entropies relation were made less strict: instead of using the 2nd law to explain these relations, an analogy was suggested, while it was noted that it should only be taken qualitatively. Everywhere it was mentioned that these entropies are only a part of the total thermodynamic budget, so I concentrated only on the self-consistent relationship between them that we found.