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Interactive comment on "Comment on "Soil organic stocks are systematically overestimated by misuse of the parameters bulk density and rock fragment content" (Poeplau et al., 2017, SOIL, 3, 61–66)" *by* Eleanor U. Hobley et al.

Anonymous Referee #1

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I am glad that the discussion on the SOC stock is lively. However, I have to agree with the comment of Poeplau that there is no mathematical difference between the calculations in Poeplau et al and the ones proposed by Hobley et al. Therefore, a further discussion does not necessarily clarify the calculation of SOC stocks. It is vital that authors carefully state the equation for the SOC stock that they use, define the way they express the rock fragment content and last but not least the bulk density. Although this is not explicitly mentioned by Poeplau nor by Hobley, the bulk density of a stony soil is not so easy to estimate. I fear that in many cases the bulk density is estimated from

the weight of a small cylinder inserted in the soil between the rock fragments. Does such an estimate represent the whole soil or fine earth bulk density? In short I would be in favour of ending the discussion, and making sure in our reviews that we carefully consider the way the SOC stock of stony soils is calculated.

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