

## ***Interactive comment on* “Good Vibrations: Living with the Motions of our Unsettled Planet” by Tamsin Badcoe et al.**

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Received and published: 8 July 2020

**General Comments** This is a fascinating study which brings together seismologists, artists and researchers from the schools of English, Earth Science and Art History at the University of Bristol. This unique variety of expertise allows for the analysis of seismic signals and their perception by people in ways that have not been considered before, bringing a refreshing perspective to seismic studies from a new angle.

**Specific comments** In section 2.5 in the last couple of sentences there is some confusion about the relationship between earthquake magnitude, signal amplitude and event energy release. As written it implies that the relationship between magnitude and amplitude (x10 for one unit) is similar to that for energy but then goes on to say that this

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is a x32 per unit magnitude relationship. This could be clarified to differentiate better between the two relationships.

In section 2.6 (line 351-352) it states that a Modified Mercalli intensity value of V -VI corresponds to a magnitude 5 on the richter scale. In order to avoid confusion between intensity and magnitude concepts it would be better to modify this statement along the lines of " ... corresponds to the shaking experienced close to the epicentre of an earthquake with a magnitude of 5 ... "

In section 2.6 (line384) it states that the mechanism for bells ringing remains unclear. I would have liked to see a discussion at this point about the possible effects of resonance between the seismic wave frequency and the natural oscillation frequency of either the clapper/bell system or the whole belltower structure

In section 2.7 during the discussion of collaborations with artists I was disappointed to not see a more detailed discussion of this aspect of the work. As the artistic collaborations involved visual (dance) and auditory (soundscape) pieces I understand that it is difficult to convey their content in a written article. However as this collaboration is one of the unique and innovative aspects of this work I had hoped to see some more reflection on this work, maybe in the form of quotes from the performers or audience describing their emotional responses to the work (or even in the form of mood boards or wordclouds )

In section 4 (line584) the raspberryshake citizen sensors are described as using MEMS sensors. While raspberryshake systems are available as MEMS based systems their sensitivity is so low that they only work as strong motion sensors in zones of high seismicity. In the UK the raspberryshake data analysed in this paper all comes from the geophone based raspberryshake sensors which use a conventional geophone system (with a natural low frequency limit of 4.5hz which is electronically modified to give it a frequency response of 1Hz-40Hz)

Technical corrections typo line 282 "understand" should read "underside" typo line 543

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"in and impermeable" should read "in an impermeable"

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Interactive comment on Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2020-28>, 2020.

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