

Review of: "On the Mass of (Gravitational) Potential Energy"

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The author discusses the problem of changing the mass of a body whose potential energy changes. The work focuses on gravitational potential energy but is applicable in general to potential energy regardless of its type.

Using thought experiments, the author shows that: a) if the mass of a body changes with a change in its gravitational potential energy, the change of mass is concentrated in the mass of the body and not in the energy field, b) the gravitational potential energy of the body increases or decreases its mass. Finally, the author shows that the distribution of the change in mass of a system of two (or more) bodies, resulting from the change in their potential energy, is distributed among all the bodies. The change in mass of each body is proportional to the change in its distance from the center of mass of the system.

The thought experiments presented are simple and well interpreted. The conclusions presented are beyond doubt. The issue is not usually addressed when discussing systems with changes in gravitational potential energy. On the other hand, the true nature of gravity is not yet fully understood. Therefore, in my opinion, the presented work is worth publishing and public discussion.