Gravitation and the Vacuum

A gravitational attraction acts between two massive spheres suspended on long cables against the greater force exerted by the Earth, and moves them fractionally into a closer association.

However physicists admit that they are unable to explain the transmission of gravity, and carry on as if this fact has no effect on their deliberations, or upon their various theories.

But this force cannot act, between these masses in either direction, through the hypothetical structure of the atmosphere that is accepted by **all** practicing theoretical physicists.

Therefore there is something fundamentally wrong with this hypothesis.

And, as Galileo mumbled:- *"But it moves"*.

This hypothetical structure of the atmosphere is the kinetic atomic theory of gases, which states that atoms are separated by an 'empty space' of various speculative compositions, all of which are, by definition, required to have no influence on the eternal 'kinetic' motions of atoms and on their perfect collisions with other atoms.

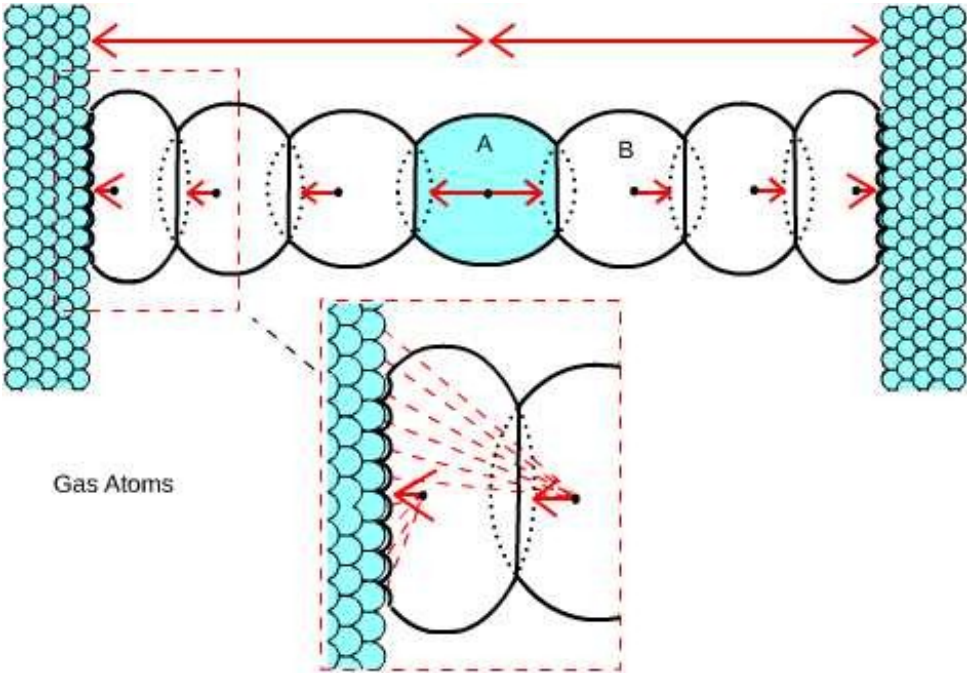
Another factor is that today atoms themselves are believed to be composed, almost entirely, of a *"perfect vacuum"*, which obviously cannot transmit a force sub-atomically.

In this scenario the two masses are both subjected to the collisions of such 'vacuum' atoms, the hypothetical purpose of which collisions are to apply forces, essentially to generate atmospheric pressure on their surfaces.

Accordingly the two masses are subjected to these collisions on all sides, and so the actions of these 'kinetic' atoms cannot affect their alignments towards each other.

However, if the hypothetical vacuum is assumed to be an impossibility and accordingly atoms, which have been proven to exist as particulate entities, are composed entirely of matter and are in a continuous structure, then such a structure can obviously transfer attractive and repulsive forces atom to atom between two masses.

As in the simplistic diagram below (the only purpose of which is demonstrate the principles involved).



The densities of the outer regions of gaseous atoms, which atoms are typically 1500 times the volumes of those in the solid state, are significantly less than at the centres, and external forces, such as the pressures exerted by the fields of surrounding atoms, distort their mutual and nominally spherical forms.

In the diagram above a single row of atoms is depicted and only lateral, inter-atomic forces are indicated.

The far greater concentration of atoms, and thus the masses, of the metal spheres acts to distort the gas atoms so that the atoms in close association with the surfaces are subjected to greater attractive and thus compressive forces on their outer perimeters, as indicated in the sub-diagram.

And as Newton's Laws apply here, the combined attractive forces of the constituent atoms of the spheres through the gases will decrease progressively to the mid point between them, where an atom at this point is subjected to forces from each and is pulled/stretched in both directions.

In these circumstances, if the vacuum were a possible state, then it is at this point where atoms would potentially be separated to introduce an inter-atomic 'empty space'.

However, as this state is not possible and accordingly the resistance to this state rises exponentially towards infinity, this central atom is pulled in both directions, it is experiencing forces that tend to expand its volume in lateral directions.

But as the only factor that can permit expansion is an input of energy from adjacent atoms, which atoms are under the same decompressive influences, then any possible extraction of energy directly from these atoms would be very limited.

Therefore this linear array of continuous atoms is transmitting an attractive force directly between the two spheres.

But, at the same time, each atom of the gas is acting repulsively on its adjacent atoms, so this process of the transmission of the force, described as gravity, between these two masses is a process of action and reaction, as it is required to be.

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