

Brownian Energy

Jacob Ghitis ghitis@isdn.net.il

Brownian Motion (BM) was first described nearly two centuries ago by the botanist Robert Brown. Albert Einstein then developed the pertinent mathematical calculations, which were subsequently confirmed. Brown explained that tiny particles suspended in liquid or gas are constantly moved by the erratic motion of the molecules. No explanation was ever offered for this phenomenon. I posit that the atomic and molecular movements of a fluid derived from the protons' spin are the source of Brownian energy. Their apparent randomness is due to the impossibility of calculating such movements.

Brownian motion is generally considered as a sort of nuisance, a manifestation of entropic disorder. I propose to explain how this motion is integral part of the natural conditions that allowed for the development of life, and that the BM is the microscopically visible manifestation of Brownian Energy (BE), which derives from protonic spin.

Air is a mixture of several gases of different molecular weight, yet the concentrations of the main ones, oxygen and nitrogen, remain constant. This is attributed to their mixture resulting from atmospheric effects. That such an explanation is false, is proven by the constancy of the mixture in a closed vessel. I posit that the BE is much stronger than the gravitational force on the air molecules, so that the resulting BM is what causes the uniformity of the air mixture, a condition essential for aerobic life.

A balloon with hydrogen goes up as a manifestation of Archimedes' law. However, when hydrogen is just added to a closed vessel, it becomes homogeneously distributed. Hydrogen and the other lighter gases concentrations in air increase at altitudes over 90 km. At high altitudes, the scarcity of molecules results in less BE, so that gravity's force, even though also decreased, is more effective at pulling the heavier molecules. Thus, air in a sealed bottle would show an invariable distribution when tested at the low gravity of high altitudes. Under partial vacuum conditions while on Earth though, there would be a greater hydrogen concentration at the top of the bottle; therefore, hydrogen added to a partially evacuated vessel would likewise concentrate more at the top. This postulate should be demonstrable by adding tritium in both conditions and comparing its concentration along the container.

Conclusions: The essentiality of BM for life can be better understood by realizing that the proteins and other molecules in the blood and cells are colloids, which are not solutes, but rather dispersed submicroscopic particles. Their passive movements are dependent upon the force of BM, derived from BE, a force that overcomes the gravitational force of the Earth.

The function of gravitational pull as balanced against BE should be reflected in the Brownian motion at different gravitational environments. For instance, the gases in Jupiter's atmosphere might tend to form layers according to their molecular weight, thus explaining why hydrogen and helium are so predominant in the upper layer. Such layering might influence Jupiter's winds. The fact that Europa has an atmosphere while Earth's more massive moon does not, suggests that other variables, such as temperature, determine the atmosphere. The feasibility of life dependent on essential colloids, as are the proteins, is another factor in determining that our planet is uniquely fit for the development and evolution of life.

[Journal Home Page](#)

© Journal of Theoretics, Inc. 2003