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Neuerwall 69.

Hamburg. Jan 21. 1892

Dear Sir

I would venture just to mention to you a matter which although partly personal, has doubtless an independent scientific interest.

I may say then that commencing with a paper on the "Mode of the Propagation of Sound and the physical Condition determining its Velocity on the Basis of the Kinetic Theory of Gases" (Philosophical Magazine, June 1877) and following up with the application of the Kinetic theory to ^{*}gravity - simplifying Le Sage's theory greatly as is admitted - I was led as a sort of logical sequence to speculate on the possible application of the same Kinetic theory to movement generally.

Now I am quite aware that speculation about the (very) illimitable universe may appear hardly, not to say presumptuous. But the principle I go on is to look for evidence of what exists in our neighbourhood, not deterred by the infinity of space which we cannot solve.

So I proposed (rather taken aback by Thomson's theory that the Universe was approaching a sort of chaos of uniform temperature, inaction or death) that under the Kinetic theory of gases, it might be

* Papers on gravity, Phil Mag. Sept & Nov 1877, Feb 1878.

conceived that uniform temperature might exist now in the universe with a certain meaning (and without the above consequences). For according to the Kinetic theory, we know that in a gas the greatest diversity of temperature exists from molecule to molecule, when the whole gas is said to be at uniform temperature. My idea was to magnify the scale here, and so to say; the greatest diversity of temperature may exist from star to star (dark and bright), from one meteoric block to another, and yet, viewed broadly, uniform temperature may exist, provided units of volume on proportional scale be compared together, i.e. each unit of volume containing many millions of masses (small and big, including also single molecules and minute particles) all moving together under the principles of the Kinetic theory of gases. You will understand me I think, if you have not read my papers, which I venture to believe contained a parallelism at least consistent with a net offered to Lockyer's meteoritic theory of the origin of the diverse bodies in the known universe (especially a paper of mine published in Nature March 20, 1879, and Phil Mag. August 1879 &c &c may be mentioned).

Prof. Ludwig Boltzmann of Graz I may remark, to whom I wrote at the time, offered to

submit the whole subject to mathematical
treatment, if I put my views in more detail
before him (which I did). But he found (as he
wrote afterwards) the task too laborious to
undertake. He however subsequently communicated
my complete papers collected in one with additions
to the Vienna Academy - to be found in the
"Sitzungsberichte" April 1883. I have other papers ¹⁰⁻²⁰
and letters on quite different subjects which published
in Nature. But I may mention that the Editor
in publishing (in the Number of the 21 years
anniversary of that ^{Nov 7, 1889} journal) a list of contributors,
- omitted my name from that list, and on my
writing to tell him of it, I got no reply. I suppose
it is now too long since to derive any benefit by
stirring up the matter; but I should be none
the less glad or much obliged for your advice as
an impartial observer or critic.

I am

Yours very truly

S. Tolson Prestor

P.S. Enclosure might be kindly returned at your
convenience, or when you have quite done with them.

Prof. J. F. Fitzgerald F.R.S