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Neuerwall 69
Hamburg. Sept 3. 1890.
Germany.

Dear Sir

I am afraid you may think my last letter not well considered in going into a speculation without knowing the exact law of variation of stress * under extension in the case taken. But it occurred to me as possible that independently of what such law may be, some kinds of seeming "action at ** distance" may possibly be explained by the existence of connecting vortex-filaments, so thin and so tenuous or so small as to be imperceptible to us, and yet which when left to themselves may recover their straightness with a velocity comparable to that of light - provided their mass be small enough (which seems quite a possible condition). Hence I fancied the question dealt with in my last letter might have an abstract interest: and this

* I might have alluded to three papers on a modified physical theory of gravity by me in Phil Mag, Sept & Nov 1877, & Feb 1878.

must be the excuse for my letter - although
(I should rather say perfectly arbitrarily for the sake of the speculation)
the law of speculation. New out seems to me
now very improbable.

Also I did not wish to lay too much stress
on the seeming difficulty of explaining (say) the
passage of a planet through an ether supposed to
consist of vortex filaments in tension without
deranging the propagation of light notably: - as
doubtless this point has been well considered.
Sir John Herschel who in his "Popular
Lectures" throws out the idea of "stretched
chords" propagating light - does not mention
at all about effects to be expected by the
motion of bodies in a medium so constituted. I should
be glad to have an idea as to how this
apparent mechanical difficulty is met, if you have
a moment's leisure, & I am not expecting too
much.

Yours truly
S. John Preston

P.S. The idea of all bodies being more or less
connected by almost infinitely thin vortex filaments,
and "telephoning" thought along it (direct from one

* Mentioned also in your paper in Nature June 19,
1890, on Electro-Magnetic Radiation.

brain to another, instead of first passing
through the vocal organs as in an ordinary
telephone) - seems rather attractive as a
speculation at least.

The difficulty of explaining some
experiments on "thought reading" at an
intervening* distance of a kilometre or more
(and numerous observations of a reliable character at
less distances) - may render me not too
critical in regard to any** speculative hypothesis, as
a physical basis to give an idea. I might
mention that I have recently written to Prof
Barretto in reference to "thought-reading", and
did not observe at first the fact of his
address being at the same University.

Prof G. F. Fitzgerald F.R.S.

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* Experiments carried out under the auspices of the
"Society for Psychological Research".

** Yet possibly the electromagnetic ^{ether} may be found
ultimately to be capable of giving a sufficient explanation,
without looking to anything additional.