

or wrongly) that heat and electricity
which are forces may be interchangeable
with the force of gravity. Electricity and
magnetism (and even heat I think sometimes)
attract and repel as gravity attracts.
But I don't know if this is what Mr Ked-
zie means.

I think likely at all events that there
are ether-waves of lengths intermediate
between the extreme heat-rays hitherto
known and the electric rays of Hertz and
that these produce effects of some kind and
may be changed into longer or shorter or
vibrations under certain circumstances. Also
it seems not unlikely that there may be
waves beyond the extreme chemical on
the one side and beyond Hertz's elec-
tric waves on the other. I remain

Sincerely yours
W H Sillenck

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29/11/88

My dear Fitzgerald

I am obliged for yours and I
think the time-propagation of gravity
may afford the explanation of why the va-
rious bodies in the Universe have not come
together so as to form one Mass. Considering
the time during which they have existed I
think of the laws were such as to produce
this result ultimately it would have been
already reached. Do you know of any one
has computed the effect of a propagation of
gravity with the same velocity as light and
ascertained whether it would have produced

an appreciable lengthening of the year during historic times. (The area described in a given time could not I fancy be measured with such accuracy as to show whether these minute changes occur or not). But would all orbital motions be accelerated? The motion of the Sun (which is of course very slight) is I presume chiefly dependent on Jupiter whose mass exceeds that of all the rest of the planets put together. The motion of Jupiter might be accelerated if the force was directed not to the true place of the Sun but its place when the force left it (This expression may not be quite correct but you will understand what it means) but would the motion of the Earth be so. The main effect however would be pro-

bably due to the Sun's motion through space toward a point somewhere in Hercules. The Sun would make some progress in this direction during the time between the transmission of the impulse and its arrival at the planet. How would this affect the planets' motion? 1/107
I suppose if gravity was propagated with the velocity of light the attractive force would always be directed toward the centre of the visible Sun and possibly the law of equal areas in equal times round the centre of the visible Sun might be found to hold good - the visible Sun not being in the position of the true Sun at any moment owing to the time-propagation of light.

I don't believe in any creation of matter or in any confines of the ether but don't see any difficulty in supposing (whether right