SUGGESTIONS ON GRAVITY CONTROL THROUGH FIELD MANIPULATION

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The Fisher-Hooper experiment[1] which we have successfully repeated several times suggests that there is a relationship between gravity and the motional magnetic field, and that they might even be the one and same thing[2]. Cur experience in electrical engineering indicates that the motional magnetic field is electric in nature in that it can move electric charges. We know that we can shield out the effects of displaced electric charges. but we can't shield out the effects of gravity or of motional magnetic fields.

We believe that the electric field induced by a motional magnetic field is distributed throughout the region occupied by the motional magnetic field, and if that region is also occupied by a conductor then there will be electric charges displaced to its surface in such a manner that the two fields will be equal and opposite inside the conductor and there will be an electric field outside the conductor equal to that of the displaced charge.

We notice at once a dimensional discrepancy here since the electric field from the displaced charges emanates from a surface whereas the electric field induced by the motional magnetic field appears throughout the volume, even though the gradients of the two are of necessity inversely identical. It is fairly obvious that this can only be true if the two fields continue to exist independently and do not combine to form a resultant field structure, from which we may generalize that fields of the same kind may interact to form a resultant field structure only if their antecedents are compatible.

Again, suppose that there is not a conductor in the region occupied by the notional magnetic field. We have good evidence (in the Betatron) that the induced electric field is still there and if the region is occupied by material which is non-conducting, such material will obviously be subjected to exactly the same electrical stress as was the conductor. Now, since we believe that matter is fundamentally electrical in nature such stress must

(1) A Progress Report on gravitational Research. Joel E. Fisher and W. J. Hooper. Presented at New Boston, N.H., August 16, 1958.
(2) New Horizons in Field Theory. W. J. Hooper (unpublished)

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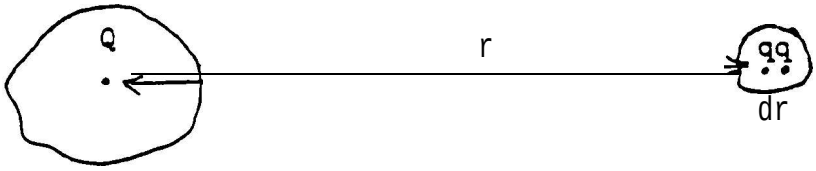
result in some kind of "polarization" which will not be offset by the movement of charges.

From the foregoing we may conclude that the electric field induced by the motional magnetic field could and probably does have very much the same properties as gravity, and in fact might be the same thing. We note that it will induce a "polarization" in matter, whether conducting or non-conducting, and such polarization remains aloof from any electric fields due to charge displacement which may also develop.

From our observations on the behaviour of gravity we conclude that the individual component fields must have compatible antecedents because resultant field structures do form, and furthermore behave externally as if they emanated from a "center of gravity". Furthermore, the idea of polarization is entirely consistent with the observed "big mass - little mass and force between them" relationship of gravity.

Consider a chunk of matter Q and a smaller bit q separated by r.



Polarization force in the small bit is q(qdr)

Equating forces $q(qdr) = \frac{Qq}{r^2} + \frac{Qq}{(r+dr)^2}$

Gravity $F = \frac{Qq}{r^2} - \frac{Qq}{(r+dr)^2} = (qdr)^2 \frac{1}{r}$

This equation says that, if the foregoing reasoning is correct, gravity is proportional to the square of the "polarization" times the "divergence" of the field from Q. In the vicinity of the surface of this planet we have

Polarization = 2.5×10^5 esu.cm/gm
Equivalent Q = 5×10^{22} esu
Divergence = 1.6×10^{-9} cm^{-1}.

It is suggested that the Fisher-Hooper experiment(1) must have been

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operating on the polarization term of this equation because

1. The effect was very small, and

2. It always resulted in increased gravity.

If it is our desire to control gravity this obviously is not a very fruitful place to operate and we would do much better to see if we can work on the divergence term, which is much smaller and occurs to the first power only and hence can be made negative.

To alter the divergence of the field from Q it should only be necessary to add at right angles, field components having compatible antecedents so that a new field structure will form having its own characteristic divergence. In this manner we should be able to make the divergence of the new structure almost anything we desire and objects within this structure would experience a "gravitational" force F= (Polarization)^2 x (new divergence). Obviously, if the new divergence is negative objects subjected to this force will tend to fall away from rather than towards Q.

There are a number of mechanical and magnetic problems associated with obtaining in practice a motional magnetic field with compatible antecedents and a configuration to approach the above requirements but these problems do not seem to be insurmountable and experimental work is now under way which should establish whether or not this method can really be used to control gravity.