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England AL3 4AS.

26 April 80.

Norman W. Molhant,  
41 Woodhaven Circle,  
Dollard-des-Ormeaux,  
Quebec.

Dear Norman Molhant,

Thank you for your letter dated 17 April, which gave me a lot of pleasure. I think you have accurately grasped the situation, technical, psychological and political. Broadly, I agree with your technical analyses.

As my/our theories develop in further books, the readership will diminish, and I am covering that eventuality by increasing the price of further volumes above the already high price of the first two. The third book, ELECTROMAGNETIC THEORY VOL 1, has so far sold some ten copies at £18, and already broken even. I still cannot publish any of my work in any other journal but WIRELESS WORLD, which only takes about one article every seven months or so; not enough.

‡ This is regardless of the "tone" of the articles that are rejected. I have "solved" this problem by deciding to publish one of my/our own blue books every nine months or so. That will at the worst cost me about £300 per year, should no one buy them. I shall have done my duty by getting them into the copyright library so that they shall be permanently preserved, whether anyone buys them or not. As to people buying the further volumes, I have concluded that there is very little real interest in electromagnetic theory in the world today - frighteningly little. People are interested in it as fodder, or roughage, for the setting or passing of examinations, but not as a subject worthy of research. You have shown in your April 17 letter that you are an outstanding exception, and it is important that you should have the third book to hand, as you have said. Therefore, if you buy it yourself I shall be happy if you have it for £8. However, I would recommend that you get a library to obtain it for you, in which case they will pay £18. Full details are in the microfilm list of books in print in Britain. ELECTROMAGNETIC THEORY VOL 1 by IVOR CATT, ISBN: 0 906340 02 0, C.A.M. Publishing, price £18 post free. The quality of the volumes will deteriorate as time goes on, because the purpose of publishing them is to record our latest disclosures in the copyright library rather than to attract purchasers. We have to regard the present period as virtually dead from the point of view of interest in science, but that does not mean that there will not be a revival in 20, 30 or 40 years' time, when our work will be valued, if available. Please regard the offer of the book at cut price as confidential.

The article THE RISE AND FALL OF BODIES OF KNOWLEDGE, which is reprinted in the third blue book, analyses the politics of knowledge, and the rearguard fought by an old body of knowledge (e.g. Theory N) against a new, rising body of knowledge. It is important to emphasise that no ethical limits restrain the behaviour of a knowledge establishment when it is threatened. Also, attempts to mollify an established knowledge power base at the very time when one is threatening it are futile. I made such attempts over a period of many years. My present view is much simpler, which



is that an established knowledge power base will fight to the death rather than allow the articulation onto itself of new information, or knowledge. Your analysis of whether one or other tone, or approach, by ourselves would have expedited the communication of our new disclosures becomes irrelevant as we have proved, as I believe we have, that academia will not tolerate new information, and will use any means at its disposal to suppress it. It will also attempt to prevent even the recording of new information. ~~It~~ I have won that latter battle, and whatever I have to say will survive for the next 50 or 100 years in the British Library. However, I shall definitely lose the battle over communication, and have done. It is too important to too many people that our discoveries in E.M.Theory should not become generally available to ~~xxxx~~ students. A referee has a very simple criterion by which to decide whether to suppress information; if it is new, it must be suppressed (or rather, its disclosure delayed for 15 to 20 years, time enough for the present generation of lecturers, professors and text book writers to get the full benefit from the previous body of knowledge.) Given the fact that new knowledge introduces such a massive threat to the career paths of professors and lecturers, it is naive to expect that they should react to it with any sympathy or tolerance, and they do not. Generally, a scientist who tries to trade in new knowledge is dismissed as senile if old, or ignorant if young. Such people will also be called paranoid, arrogant, messiahs etc. etc. It becomes important for knowledge brokers to protect them against themselves, and to this end they will happily enlist the help of the trouble maker's wife, family and friends. Every leading academic with whom I have been involved has subjected my wife to at least half an hour's harangue over the telephone. This includes Scarrott, K.C.Johnson, E.A. Newman, D. Claydon, O'Dell (Imperial Coll.). However, Prof. Brown of Imperial and Gosling of Bath Univ. have not harassed my wife, it must be said. All those who go for my wife are of opinion that I will ruin my career unless I stop talking about E-M Theory. O'Dell of Imperial College tried to drive a wedge between co-authors Catt and Davidson, spending 30 minutes on the 'phone telling Mrs. Catt that whereas Catt was brilliant, Davidson was an ignorant juvenile, and Catt should not have associated himself with him.

Unprofessional conduct when the traditional knowledge base, and the power, money and prestige that goes with it, is threatened, is not limited to such ~~hx~~ harassment. After contracting to publish THE HISTORY OF DISPLACEMENT CURRENT, The Institute of Physics cynically broke their contract. More recently, even when Essen F.R.S. was reading the galley proofs of a paper containing new information by him that Inst. Phys ~~was~~ had contracted to publish, th4 they then did not publish when they discovered that it contained new information.

In the face of all this behaviour by the guardians of the means of communication, I feel I am entitled to limit my p objective to the recording of the results of my researches, and give up on communication. I do not believe that academia could block new communication so generally if it did not have the hearty support of scientists in general and the public. Scientists want to stabilise scientific knowledge in order that their lives should be easier, and



would secretly applaud the kind of treatment that has been meted out to C.A.M. Consultants.

It might be worth mentioning that my work on microelectronics and a computer architecture has been totally suppressed for eight years by the "reputable" journals in Britain. However, that is recorded because there are published patents on it, so I do not have to set up a publishing house etc etc to ensure that that information be not ~~ix~~ lost.

My wife and I made a point of lunching with D.A. Bell at Hull two weeks ago ("No radio without displacement current"). We found him to be a zero. He only became Reader in Electromagnetics in Birmingham Univ. because "that was the name of the ~~ix~~ post that was open". His interests are signalling down (undersea) telephone cables, noise, and information theory. He does not seem to be interested in E-M Theory. A guardian of the faith does not have to be very competent; all he has to do is to recognise and root out new information. Davidson spent three hours with Prof. Brown, Imperial, who has had a part in keeping our stuff out of IEE pubs. Davidson found him rather lacking. O'Dell, his subordinate, told us "The old boy is past it". These are the kind of people who get in our way.

Re your bit about relativity, I would point out that a sine wave is anti-relativistic because anti-instantaneous action at a distance because a sine wave necessarily resides at more than one point in space at a given instant in time. So it is not a primitive, because part of itself can never know about the existence or non-existence of another part of itself. As you say, adjacent cycles are separated forever by an impenetrable time-space barrier; they are "elsewhere" to each other. So the primitive must be one cycle only. But within that cycle, the first half cycle is separated from the second half cycle by non-instantaneous action at a distance. So the primitive must ~~be~~ ~~at~~ a half cycle or less. And so on, down to the thin surface of energy current $\frac{1}{2}$ .

A number of years ago, over the 'phone, Walton said to me, "I have come to the conclusion that Relativity has got to go." Please don't get trapped into the relativists' obsession with simultaneity. I would have thought that the concept of simultaneity is properly one of the first casualties to the idea of no ~~ix~~ instantaneous action at a distance, which I would think was at least tending to mean "no simultaneity at a distance", among other things.

There is no solid evidence for the basic a priori postulate of Relativity, that it is impossible to determine absolute position or absolute velocity. The results of M-M have been rigged, and also the results of light bending round the sun. For all the braying about  $e = mc^2$ , relativists do not seem to be energy based. They do not seem to say, as I do, that energy must know what it is and where it is. Concentrate on what energy knows about itself and its environment rather than on observers running around with their clocks. Relativists seem to have little feel for energy. They never mention the impedance of space, which is crucial. This emphasis on observers is a throw-back to eastern philosophy, it very recently occurred to me. If you read the early "giants", Bohr, Born, Heisenberg, and the rest, you will be surprised to find



(Catt-Molhant, 26 April 1980, page 24

find them rather shallow, and philosophically weak. Einstein, although he made some major gaffes, comes out well, and always refused to go along with a lot of the stuff the others brewed up. His major "error" is that he never looked at a high speed logic pulse travelling down a transmission line, so he could dismiss such a thing as absurd.

I note that you are calling the Heaviside Signal T.E.M.R. We believe that it is important for Heaviside's reputation to be built up, so I would regret your avoiding the name Heaviside Signal for a slab of energy current.

I fully agree with your definitions, of specifications, 1 thru 6 in new formulation of T.E.M.R.

I am unwilling to say how you transform (5) into vector notation. It would be a real drag for me.

Re your question, "Are the equations a complete description?"

I would answer that they are more than a complete description, that much of it, e.g. (5), can be omitted. Also, you have let yourself be sucked into the wrong frame of reference. The position I take now is that electromagnetic theory is not a mathematical subject, so there is something faulty about the very idea of dressing it up into something which replaces Maxwell's stuff but has the same kind of general appearance. To clarify my point, I would say that the Maxwellian div, del, partials and so on (by Maxwell I mean, not what Maxwell actually said, but what is attributed to Maxwell) could just as well be inflicted onto other subjects, for instance fluid mechanics or strength of materials. You could ~~ex~~ for instance take Hooke's Law applied to a block of elastic material which contained strains and movement and pour lots of maths into it similar to the stuff that Maxwell and his followers poured into E-M. It is ~~an~~ a historical accident that E-M got loaded with this stuff, and other subjects like fluid mechanics did not. To a degree the result is that "good practical engineers" who lack fancy math can build bridges and aerofoils\*but can do nothing much with electromagnetics. Perhaps it could have gone the other way. I trust you see that the main point in MAXWELL'S EQUATIONS REVISITED is not that the minus sign is right or wrong, but that it has no significance. That is the thin end of the wedge, trying to split E-M Theory off from fancy math.

I agree with your point that Maxwell's Equations can still be derived from the primitives, and that your items 1 thru 6 are closer to the real primitives than Maxwell's set.

\* Aerofoils is a bad example; the overhead of math in that case is heavy.

"Is it possible to find a neater formulation of these equations?" At one time our answer was, "The set which replaces Maxwell is something like Z, c. Z gives the aspect ratio of the space; c is an indication of the time delay across the space. A better set is Z, t, where t is the time taken to traverse a region of space. Z is the aspect ~~x~~ ratio of energy which will be accepted by the region of space." It's a very far cry from the conventional attitude.

This is written in a hurry. Please do not hold me to every detail.

YOUR MINDS  
FOR CATT