Heat as Substance

by Miles Mathis

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I wrote a paper on heat in 2010, but haven't seriously addressed heat since my 2019 paper on converting light to heat, in response to the experiments at Rice University. But I am back today to hit the subject again. I do so because I got bored rewriting the Quantum Field Theory textbook, finding it to be little more than an extended snowjob. Beyond the first chapter, it doesn't require a rewrite: more like a pulping. So I ordered some old books from Ebay and Abebooks, hoping to find more meat in the 19th century. The one I have been reading this week is John Tyndall's *Heat Considered as a Mode of Motion*, from his 12 lectures delivered in 1862 at the Royal Institution. I am glad I am because it helps me put my charge field theory in a better historical context. I had not realized how far back the switch from heat as a material substance to heat as molecular motion went, or how little has changed in that regard since 1862. Although almost nothing was known about the atomic level at that time, much less the subatomic level, the theory of heat is now pretty much what it was then.

That so little progress has been made should be astonishing. You will say it is because heat as molecular motion was correct: what progress could there be? I have shown in the past two decades that there was room for much progress, and that what was called for was a return to heat as a material substance: a real charge field of real photons being recycled through matter. That was the gist of my 2010 paper, but I put it in no historical context there. Now, 15 years later, I understand better what happened in the field, and why it happened, which is why I am here now to tell you what I see.

I now suspect my charge field theory was refused out-of-hand precisely because it was seen as an outdated "heat as material substance" theory, which the mainstream thought had already been disproved by hundreds of experiments (some of which Tyndall repeats). But as usual, this kneejerk reaction was a huge mistake, because it failed to take account of the fact my theory wasn't just a return to 18th century materialism. Nor was it a dismissal of heat as motion. In fact, as I read Tyndall, I disagreed with very little he said about that, neither his reports of the experiments nor his conclusions. As far as they went, they were all valid. On one level, heat IS motion, so he is not wrong. The mainstream hasn't been wrong for 150 years, they have simply been incomplete. For the right answer is that heat is BOTH motion and material substance. It is the motion of material substance, but that substance is not—at the ground level—molecules or atoms or even ions. It is the motion of real charge photons.

You can already see, just from that gloss, that this is a huge update from the old heat-as-material-substance theories of the early 1800s, so there was no way to dismiss me by lumping me in with that. To answer me would require a much fuller response, a response we have never once seen from anyone.

All this dawned on me as I read Tyndall, because in those lectures he starts by giving a short overview of heat as material substance, and I nodded my head, since it all looked good to me. Then he moved on to his own theory of heat as motion, and again I nodded along, since it all looked just a good. But then I reminded myself that historically these famous physicists thought it had to be one or the other. Tyndall is selling the idea hard that if heat is motion, it can't also be material substance, although he makes no real argument for that. He just assumes it. He shows a lot of evidence of heat as motion and

you are supposed to just throw heat as material substance in the trash afterwards in response. I am not sure why.

But that is what everyone did for 160 years.

[*Almost* everyone. I remind you that someone even more famous than Tyndall didn't fully agree with his conclusions. Like me, Maxwell didn't have any problem with the motion part of the argument, but he knew that wasn't the whole answer. He knew that light was involved and that light was material. See his *Theory of Heat*, 1875, p. 233 (p. 212 in some editions), where he tells us heat IS light. And not just the velocity of it, but also the substance of it.]

That is what humans tend to do, and we have seen it before in big questions like this, where a scientist walks through one door and closes and locks all the other doors on his way out, swallowing all the keys so no one else can get in. That is to protect his own new theory, as we saw with Newton and Bohr and many others. And this helps us explain why the question was dodged so assiduously during all that time, with mainstream scientists never thinking to give the charge field any materiality. Or maybe some thought of it, but they weren't *allowed* to do it, since that materiality would be a return to the old heat as substance theory they thought they had buried once and for all time. The heat as motion guys controlled the field, and they wouldn't allow anyone to theorize in another direction. They browbeat and belittled anyone who so much as whispered that the charge field must be material, drumming him out of the field as a nuisance.

But I have shown you in hundreds of papers that in the 20th century, they no longer had experiments on their side, as they did in the 19th, in the time of Tyndall. In the 20th century, experiments were continuing to show heat as motion, but they were also showing heat as substance, especially in EM experiments, where heat was acting very much like a fluid or gas. Even in Tyndall's time that was true, see his magnetic experiment in lecture II, fig. 15, p. 48, where he admits the invisible field is acting like a fluid or even a semi-solid: "I seem to be sawing through a mass of cheese or butter." That is now explained by electron flows, which, again, is not totally wrong. But it is criminally incomplete, since I have proven the electrons aren't moving of their own accords. They are being carried along in a sea of charge photons, a sea that outweighs all the matter in the vicinity—not just the electrons—by a factor of 19 to 1. They already had equations telling them that back in the 19th century, see the definition of the ampere in that last link, but they hadn't read those equations correctly, realizing what they must mean for the field. Obviously, a charge field that outweighs the baryon/lepton field by 19 to 1 would help explain an invisible field that felt like butter or cheese, but until I came along, no one made the connection.

In fact, they have begun to admit the electrons are being carried along by a field, with very recent experiments proving that. See this paper of mine from less than a year ago, analyzing reports from the Department of Energy labs. They found a "soup" of energy carrying current in "strange metals", and admitted there was a field in the space between electrons that was supposed to be empty.

You will say a field of photons can't weigh that much, or anything, since the photon has a rest mass of zero. However, the mass of the photon was always just a postulate, not a measurement, and it has turned out to be wrong. According to my calculations, the photon has a mass of about 10^{-37}kg, but at speed it has a mass/energy much larger. So to get that 19 to 1 ratio, I don't scale up from a rest mass, I scale up from a known energy. A mass equivalence. The mainstream could have done that many decades ago, but for some reason they have been hiding that with all their might for a century. Even after Einstein keyed on light and photons in Relativity and the photoelectric effect (back to 1902),

everyone still walked around like blind men, pretending they were incapable of doing simple calculations.

Yes, I consider this all so basic and obvious I can't believe it was just a big mistake. It looks to me like the purposeful quashing of light and charge theory over a century and a half, I guess to protect the reputations and Nobel Prizes of hundreds or thousands of famous people. For a long time that worked, but since my arrival it has stopped working. All those reputations are dissolving and all those Nobel Prizes are turning to dross. Had these people and their students not tried so hard to destroy me, the future might have graciously allowed them to keep their prizes, marking it up to the natural march of time. Dead people are proved wrong and no harm done. Their prizes aren't dependent upon them being right for all time. But that isn't what happened. The 20th century and all the famous scientists in it collapsed into a gigantic fraud, a huge racketeering scheme, and if I have anything to say about it, all their reputations will flip and all their prizes will be ripped from their brittle skeletons and melted back into their elements.