

## A Little about the Author

Hello, my name is T. B. Bon. I know who I am, and what I have accomplished – and much of it, I believe, has been very good. I have been a student of science and physics all of my life (and I graduated in physics some time back), and am very interested in understanding how things really work. As I went through school, my career, and life in general, I have been thoroughly fascinated by all that is about us – and in learning all that I can. Physics is perhaps at the very heart of all science – so a good understanding of its principles is critical to our correct understanding of everything else. From the outset however, I have long been puzzled – and a bit bewildered – by what seemed to be a range of peculiar and rather counterintuitive theories that have crept into science – and physics in particular – over the last 100 years or so.

First of all – I am an actual physicist. I have worked with physics and engineering my entire career. I do not wish to get any more specific than that, for I want people to judge what I have written on its merits (rather than on the supposed specifics of my credentials). The book that I have written is very intentionally conceptual, which has been done for very specific reasons that have been outlined elsewhere (in a different discussion). I do understand the math that underlies the concepts that have been covered in the book, however, I also understand very well that when someone asks “WHY”, and the person standing up to answer that question writes down an equation – he hasn’t answered “WHY”, only how we figure out “HOW MUCH”. Mathematics is a modeling tool, and can be a very good one, but only if it is used correctly, which, unfortunately is not always the case. If we have very good equations that accurately tell us how much, but we do not really correctly understand phenomenologically WHY they work that way, if we don’t have a fairly good and accurately correct picture of the actual physical phenomena behind the interaction – we really and truly do not have it right yet.

I do have a tendency to focus on concepts a lot – particularly on developing a true understanding of the actual phenomenology behind what is happening in Reality. I have never been satisfied with just knowing how to calculate something, and that perspective has served me rather well throughout my career. I believe that focus has enabled me to become particularly adept – to where I have frequently been able to ferret out such understanding rather effectively for many different applications. I have seen many situations where that extra bit of understanding provided the critical key for enabling me to ferret out a solution, while other very good engineers and scientists around me were somewhat lost because they did not have a good feel for the concepts that lie behind the math or observations.

Even as I went through my physics classes, I recognized that, despite the often-fabulous success of the mathematics for accurately calculating the measured outcomes, there seemed to be some rather significant problems with some of the concepts that they were teaching to go along with that math. Of course, at that stage of my process of learning and understanding, it would not have been wise, nor would it have done any good to say anything. A few years later, as I was evaluating some of those on-going frustrations in my mind, I realized that if I did not have any better ideas – I was in no position to complain. Thereafter began an intensive effort to see if I could come to a better understanding of what is really happening in Reality – something that made coherent sense. Over the next few years, I went through a lot of evaluation and unlearning as I recognized that even some of the ideas that I *had* been comfortable with ultimately did not appear to be really complete either – but by the time that period was over, the seeds of the basic concepts had been conceived.

As I have reviewed much of what has developed, I have also reached the very firm conclusion that there seems to have been a bit too much dependence, for some time now, on mathematics *alone* – as if it were the one superlative super-tool that could somehow guarantee that we would always get it right. After very careful and exhaustive review in my own mind, it has become rather

clear that NONE of the tools that we have are reliable enough, all on their own, to be depended on too heavily or completely. Mathematics is certainly no exception – it, too, has far too many traps when it is used on its own; there are too many areas where it is simply not uniquely specific enough to tie us back to only one possibility. As a result, I believe that we have gotten a bit off track, conceptually at least, from the truth. Much of the math is good (sometimes exceptionally good!), at least – in so far as it enables us to make accurate predictions – but many of the concepts behind that math appear to be somewhat strange and befuddled to say the least.

That was decades ago. I tried to approach a few colleagues (both physicists and engineers) over those years – probing for any readiness even to discuss significant alternatives, but always I ran into brick walls. More recently, as I have read various books and such, to make sure that I had a better understanding of where the current thinking lie, I also found myself working on detailing out the ideas and created a whole range of notes on various topics related to the concepts. Finally, I felt that I needed to make the effort to compile all of it into a book. Even after all of that time, as I was trying to bring it all together in a comprehensive manner, I still found that there were significant holes and problems – but, with the background that I have accumulated over the years, I was able to work them out, and thus, it eventually came together in its current form.

T. B. Bon