

Why I Have Approached Things the Way That I Have – and – Critical Changes in Our Approach to Science That We Need to Make

Abstract

There are some rather significant expectations in physics and science today of how things “should be done” in order to be credible – and when such patterns aren’t followed, there are many who tend to write off any associated efforts as so much “philosophy” or “conjecture”. However, despite insisting on, and largely following those practices, physics has still found itself quite thoroughly mired down in a quagmire of fuzzy, conflicting ideas, with a whole series of irrational and illogical conundrums and paradoxes – ideas that many in the mainstream have actually decided to accept and promote as a true reflection of Reality. However, from those results, it seems rather clear to many others in physics that those supposed safeguards against “bad science” do not appear to have worked very well. In this treatise, we discuss some of the flaws behind a few of those “safeguards”, and also some alternative approaches that we have taken in our efforts, and the reasons why we have chosen the course that we have. In the process, we highlight some critical changes in the currently accepted approach to science that we maintain desperately need to be made before the practitioners of science will ever be able to get their thinking and understanding truly back on track with the truths of Reality. Our purpose is not necessarily to convince the reader of whether this combination of approaches is or is not the best direction to take, but rather to present for their consideration *why we* have chosen to do so. In the process, we also hope that we will potentially be able to help the reader to understand, partially at least, that it is a realistically reasonable combination of approaches to take towards striving to get physics and science back on track with Reality. We will strive to show that what we are doing actually is, indeed, still very good, credible science, despite its not following all of the currently promoted and accepted (even though sometimes rather arbitrary) set of “rules of good conduct”.

Introduction

How does one present significant changes to others for their review, when some of the common expectations relative to what constitutes a “credible” paper or treatise are actually reflections of some of the very problems that need to be addressed?

Physics, and the science that is built on it, are interesting endeavors that can be absolutely fascinating to those of us who love them. The actual truths of Reality or “Nature” are already out there and in force, and nothing that we will *ever* think or do will have any impact whatsoever on what they actually are. On the other hand, how we choose to approach their identification and study is guaranteed to have a dramatic impact on how well and accurately we can ultimately manage to understand what those truths actually are. The central goal of science *needs* to be to search out and understand as completely as we can what those truths are, while simultaneously avoiding the many tendencies that could surreptitiously cause us to veer off-track.

In an effort to maintain some perceived level of credibility and consistency, we tend to create rules for how we will approach and develop our concepts and ideas – rules which tend in turn to develop into guidelines for “validity” that are used extensively to judge the presumed value of different treatises. Likewise, we also tend to create other rules and practices regarding how we will communicate with each other – once again, those rules are purportedly there to try to ensure that a

certain level of “scholarly” performance and “validity” is maintained. Typically, if those erstwhile “rules” are not followed, those especially who are in, and want to remain securely in, the mainstream will tend to discount anything associated with such an effort as somehow deficient or totally lacking in merit. This tends to create a great deal of pressure to comply with those demands (which are sometimes more arbitrary than most are willing to admit) in order to not be ignored or otherwise somehow dismissed as “frivolous” or “irrelevant”. Using rules-of-thumb to determine “credibility” can actually be a very good practice, but *only if* the bases for those rules or practices are truly pertinent and valid. On the other hand, when they really are not as pertinent and valid as they are purported to be – what then is the appropriate thing to do? The focus of this paper is a discussion of some of those points as I see them, and why I have chosen to take some of the approaches that I have – in distinct defiance of some of, what I feel are, ill-advised, not-so-effective, and thus, ultimately – largely inappropriate, rules-of-thumb to go by.

I am not going to mince words. I believe that physics today has gotten well off-track from the truth of Reality – it has some very serious problems that have been largely ignored by the mainstream. Some of the problems are in the ideas and concepts, but, unfortunately, some of the most critical problems are actually in the overall approach – a result of some techniques having been embraced as being more fundamental than they really are, and subsequently used as “safeguards” against philosophy or conjecture, when really they are not truly effective as such. Of particular note, in today’s physics there is far too much of an emphasis on mathematics, especially as a means for showing us the way that we should go, as well as for a means of keeping us from getting off-track. This can particularly be a problem when we do not really have a good feel first for the ways that the phenomena in question actually physically operate. Currently, there are major problems with many of the leading concepts – with prime examples being: relativity, quantum mechanics, as well as with the concepts behind redshift and the equations of General Relativity helping to lead to the idea of a “big bang” in cosmology. In all of those cases, even though there may be good numeric agreement between the mathematical results and much of what we can observe, many of the currently accepted concepts are highly illogical and irrational – which *should be* recognized as a sure indication that they are out-of-sync with Reality. Unfortunately, all too often they are not. There are other problems as well, but those will do as a suitable example for now. Until we are able to correct those errors, we will not be able to make the progress that we ought to be making.

On top of those problems, there are a great many common practices that, rather than performing any truly useful function, primarily serve only to support the status quo, while rather effectively suppressing any ideas or approaches that are thereby perceived to be somehow “deviant” from the mainstream thought. These make it very difficult to correct any problems associated with the accepted mainstream ideas, such as those that have already been cited. I will not claim that the ideas that I have presented in my works are totally correct, nor that they contain all of the needed answers (that would surely be rather precocious, as well as most foolish and irrational!). Nonetheless, I do sincerely believe that they are collectively closer to the truth than much of what is widely accepted by the mainstream. I have purposely approached it non-conventionally, especially in the emphasis on phenomenological concepts, along with the concurrent avoidance of extensive mathematics, for it is, I believe, just a bit too soon for such – especially where there are so many who have been carefully taught to focus too heavily on the mathematics.

Am I biting off too much in one fell swoop? Surely, there may be many who might think so, however, even though it is clearly a rather ambitious approach, I do not feel that it is, specifically because I sincerely feel that anything less would be insufficient to do the job. I realize that it will likely make it much harder to get most of those who are in the mainstream or who are widely recognized as “authorities”, and likely – even many of those who are already classified as dissidents, to pay any serious attention to what is presented herein. However, if the critical points

were to be diluted too much, in a misguided effort to more readily gain acceptance, then the results would no longer be of sufficiently significant value to the reader, for much of what truly needs to be understood would no longer be adequately clear to those who are sincerely seeking the truth.

My focus in this endeavor is strictly in the interest of helping us all to understand the truth of Reality better – I have nothing to prove, nor do I need to prove any of this to myself. I would encourage the reader to read thru it carefully and sincerely, with a mind that is open to serious consideration of what is presented therein. What you may chose to do with it after that is up to you. However, I will state the following: that anyone who may choose to reject it – without actually reading it with a reasonably open mind – cannot possibly make a valid claim with respect to whether or not it is actually correct.

There are some practices that are common in physics and science today that are often used purportedly to help to separate the “good” work from that which is considered to be poor, reckless, or even outlandish. There is only one truly valid way to judge the actual value of a work properly – that is to read it, and then to consider the ideas that are contained therein fairly and without any predetermined bias. Perhaps the most difficult part of that approach is to avoid the bias, for we all tend to come to anything that we might read in physics or science with our own set of preconceived notions of what might be correct and what is not. This can be a particularly difficult challenge when dealing with truly new and novel ideas. Yet, while there are many in “mainstream” science who appear to be quite satisfied and content with the current state of the accepted ideas and concepts, to many others in the scientific community, it is absolutely clear that there are some very significant, and even serious, problems with a number of those very same ideas and concepts. If, indeed, those problems are truly real (as I claim that they are), then it is also critical that we keep searching for new ideas until we can find whatever it may be that is either missing or incomplete. In doing so, we need to be ready to give fair and reasonable consideration to any and all potentially rational new ideas that may come along – until we can somehow manage to identify adequately the real truth of what is actually *already* happening in Reality.

Any superficial criteria that someone may use to summarily “dismiss” any given work out of hand, without giving it at least a good honest read and serious consideration, is really just a crutch for the unwise. There are a great many good works out there, and there are also a rather significant number where the authors, despite what may be their best, well-intentioned efforts, have really either overlooked something crucial, or they have failed to think through what they have written adequately well. As a result, there are a great many works that actually could and should be set aside, ideally without the expenditure of excessive effort. In an effort to avoid having to read many of those “inappropriate” works, there are many of the wiser ones who will at least read the abstract, perhaps the introduction and conclusions if they are present or available, and possibly even skim through the body before they decide whether or not they may want to read and consider what is there in greater detail. While such may sometimes seem to be an expedient necessity, those who do so should still keep in mind that there are some very real possibilities of missing some crucial points that would make what is there clearer in some critical way – leading them to erroneously dismiss a good work in ignorance.

The general areas that we will be covering include: 1) References, what they really do (and don't) mean, as well as what we consider to be appropriate and actually needed. 2) What truly constitutes a good theoretical treatise – and, in conjunction with that, what should truly be the foundation of our approach to science? Here, the emphasis is both on what is needed as well as on what is not (which is in highly marked contrast with what is commonly believed – and thus with the common, promoted practice today).

1) References

References are all too often considered to be some sort of “acid test” of the validity, accuracy, value, and scholarship of a paper or other treatise. Indeed, the following statements were recently encountered in a discussion of what is needed for a “good” paper:

“References show that the author is familiar with the material and with what others say about it.”

And

“Most mainstream scientists automatically dismiss any work lacking appropriate references.”

How very interesting... Indeed, there is little reason to doubt that there is a great deal of truth in the second statement, for I have seen it happen. However, it presents a very unfortunate and uncomplimentary description for the current state of affairs in science – for it indicates that a significant amount of very good work could easily be ignored for all of the wrong reasons. Our discussion will center primarily on the ideas behind the first statement, however we will discuss them from two different directions, because my own personal reasons for including or not including different sets of possible references entail some very different lines of reasoning.

Significance of References

First, we want to cover the actual significance of what references really do signify – as well as what they don't. According to the quote above, references “show that the author is familiar with the material and what others say about it.” Certainly, there are times and situations where that can indeed be the case, however, it has never, ever been a certainty, and, especially in today's world, that is likely even less accurate of a statement than it used to be.

With the internet at the state that it is today, it would not likely take an astute user more than 10-15 minutes to amass a rather impressive set of references (and web links) for almost any topic that they may wish. Thereafter, it would not likely take them more than another hour or so then to pull a number of them up and check through them sufficiently well to ensure that their tone fit well with whatever the individual might have had in mind to support – and thus, with which to impress the reader. Yet, such a rather limited level of effort would not likely have truly rendered that individual with the level of familiarity and understanding that their list of references is presumed to imply. In short, even a very good and impressive set of references do not really establish or show *anything*, except that the author at least knows how to gather up and include references at the end of his work – and thus, to follow the de facto “rules” of the game.

As part of that same discussion on the “value” of references (from which the above quotes were extracted), a further elaboration on references stated that an author “should include references to recognized authorities... For example, a paper critical of Relativity that doesn't reference any of Einstein's original works is less credible.” While such may initially seem to be a valid point, it isn't necessarily the case at all. First of all, the enormous volumes of work addressing Relativity could probably fill a good-sized library, thus there are a very large number of “authoritative” works that could properly be referenced, some of which could actually be more appropriate for whatever approach the author may be taking than would any of Einstein's original works. On the other hand, Einstein used some thought experiments, and some observations derived from them, to support what was largely a mathematical treatise – which eventually led him to some very peculiar conclusions. If an author happens to be specifically addressing perceived flaws or errors specifically related to any of the thought experiments, the observations derived from them, the mathematical derivations, the conclusions that Einstein, himself, reached, or even the history

behind what had gone on before, then some specific references to those original works may well indeed be warranted and appropriate. There certainly have been many such works over the years.

On the other hand, there are also many cases where a particular author is actually basing his or her work on the subsequent work of others. Alternatively, there are also many cases where they are taking an entirely new approach to the whole question of *why* the equations of Relativity work so well, but where they are also supporting their approach with an entirely different set of reasoning. In such cases, references to Einstein's original works could actually be more of a distraction from the points being made, rather than any reasonable sort of clarification or support – and thus, such references to the “original works” truly would not make their presentation any more “credible”. In such cases as these, references to Einstein's original works would actually not even be truly appropriate, even though they may most certainly be somehow critical of at least some of the aspects of Relativity in their presentation.

One additional consideration concerns the very nature of the work itself. Essentially *everything* that any one of us may do in physics or science today is unquestionably built on the work of a great many other scientists who have gone before. It is not even possible to become significantly knowledgeable in physics or science without spending years studying physics or some of the other sciences, perhaps in school or perhaps outside of school – drawing upon a whole range of books, papers, and other sources. Citing that critically significant, yet rather extensive collection of works, whatever it may entail, indeed generally would be an obvious distraction and of little value in most treatises, so no one expects to ever see it – yet, that is typically where most of one's familiarity with any given topic really may have come from.

Even so, if a particular paper or treatise is actually built upon, or somehow derived from, or otherwise closely related to some very specific works of others – then some specific citations of those works would very definitely be most appropriate. Not only does such provide credit to those whose directly pertinent work had gone before, but it would also enable any readers who may not be familiar with those particular works to perhaps look them up, and thus gain a better understanding of the topic at hand. On the other hand, where a particular work is based largely on the author's *background* knowledge as well as some original thinking and effort, such a work naturally would draw on a rather broad range of inputs from here and there and all about. In those cases where no one of those sundry original sources were significantly front and center in the points presented, there may not actually even be any particular references that truly would be appropriate to cite. Once again, in such a case, any collection of references, which might have been included to meet the standard expectations, would more likely be a side-step from the topics at hand – and thus of little real value at best, and highly distracting at worst.

Summarizing, I have not tried to “prove” anything, but I have sought to provide some examples with which to demonstrate that the commonly held ideas and principles about the significance and value of references do not necessarily actually provide the true verification or meaning that are all too often ascribed to them. Based on that, I would suggest that those who tend to “dismiss any work lacking appropriate references” could well be acting unwisely, and, perhaps, also out of vanity or laziness, and thus – could easily end up dismissing some very good works out of hand, without valid justification. Using the list of references that accompany a work as a major criterion of “validity” is a rather superfluous and ill-advised basis. The only truly valid basis for the validity and value of a work is the content itself. Unfortunately, it is true that such an effort takes significantly more work, for the reader must then actually read the entire treatise (or at least significant portions of it) – and also seriously consider what is presented therein, before passing judgment. What's more – who knows, perhaps in the process of doing so, at least on occasion, they might actually even be able to learn something useful in the process.

Negative References

Second, we want to cover specifically why we usually prefer to bypass references that could be used to support ideas that we are discounting or criticizing in some manner. My reasons here are very personal – they tie back to the ways that I believe that all people deserve to be treated.

As much as is possible, when I feel that there is a problem with something – I don't want to direct criticisms at individuals because I sincerely feel that it is only most, most rarely that someone truly deserves to be publically criticized. Put another way, I prefer to presume that they are doing or have done what they sincerely thought or felt was right or best. Furthermore, they actually had the courage to put their beliefs and efforts up for public evaluation – thus, whether I believe what they presented was correct or incorrect, they at least deserve respect for trying. I have a great deal of respect for when others are trying hard (whether I may happen to personally agree with their ideas or conclusions or not) and therefore, I *choose* not to find fault with *them* wherever possible. If it may so happen that I feel that I actually need to cite problems with some particular *ideas* – I prefer not to point fingers at the individuals themselves (by citing them specifically by name). I have no issue with them, nor do I wish to besmirch them or their name.

It is a sad fact that if I cite them by name for an idea or position that I believe is at least partly in error – it will inevitably also come across, at least to some degree, as a criticism of them. I choose not to do so if I can avoid it. I really don't even want to criticize their ideas either – but for the sake of context and understanding, it is often essential to refer to many of those flawed ideas in order to explain the nature of the problems adequately. I choose to presume that they are trying hard to do the very best that they know how. I do not feel that it is appropriate to criticize someone for trying hard – at least they are trying! Therefore, when there truly needs be a criticism of any particular IDEA – I choose to focus on the idea itself and not on those who may have proposed it.

The only situations where I will choose to include a citation that I feel could be taken as negative will generally be when there is specific value in providing the reference to the reader, or where I am including a significant quote out of a published (and typically copyrighted) work. If I am quoting out of such a work, it will usually be because I feel that the original author had stated whatever position it may happen to present particularly well. Thus, even though I may be taking some sort of issue with what they said, I am also at least obliquely complementing them on their writing skills – and I feel that at least helps to counteract the criticism.

Most of the time in my writings, where there are criticisms of extant ideas, those ideas are now more or less general knowledge, where there likely have also been significant clarifications and discussions that have been developed since the idea may have originally been proposed. In such a case, I see no real value whatsoever in citing the originator by name. I may need to take issue with some of their ideas – but that does not mean that I need to take any sort of issue with them. I would rather respect them for who they are and what they have sought to do.

References Summary

The bottom line on references for me is that I feel that the emphasis needs to be primarily on the *ideas* that are being presented, rather than on the “who said what and where” in the past. I am not trying to prove myself as a well-read scholar of countless “recognized” works – rather, I am trying to present ideas, often largely my own, based on extensive pondering and consideration (and often based on a whole range of diverse sources) – to the reader for them to consider. When a reference is truly germane to the topic at hand and the discussion, I will certainly present it. Most references usually are probably ignored (except, perhaps for a cursory glance to verify their “significance”). On the other hand, if they are not ignored, and the reader happens to follow up on some that may not truly be germane to the topic at hand, then those references can actually act as

a significant distracter to the reader. In such cases it should be clear that such references can actually detract from, rather than add to, the value of the work to which they have been appended.

Thus, though I may usually include but a very few references, I maintain that says or indicates but little about the potential value of the work. Indeed, although there may be a great many works out there that truly do have rather limited value – and many of them may also have but few references – it is also true that some of the very best works are likely to be found to have but few references. Moreover, I also maintain that there are a great many works that are absolutely loaded with extensive references, which are hardly worth the paper that they are printed on. While it is true that the value or validity of any derivative work will often depend greatly on the value or validity of whatever works or efforts upon which it is based, it also depends just as much upon what the author did with that source material. In short, there is no *inherent and reliable* correlation between the number or type of references and the value, or validity, of a work. That can only be properly judged by the nature of what it actually contains. Trying to judge a work by how many, or even by what types of references it may happen to have, is like trying to judge a book by its cover – such an approach is both unwise and ill-advised, as are many other widely accepted and promoted practices.

2) What Truly Constitutes a Good Theoretical Treatise?

We will start here with another quote related to the previously referred to “review of papers” that appears to reflect the way that most in physics and science seem to feel today:

“Theoretical papers should follow a logical and/or mathematical progression. Mathematics is the language of physics. Use it to your advantage. Harsh as it may seem, theoretical papers will gain no traction in the mainstream or independent science communities without mathematical support, whether or not the theories they present are new or original. Don’t be fooled. Papers lacking mathematical support are speculative or philosophical at best, not rigorously theoretical.”

Wow! The statement that “...theoretical papers will gain no traction in the mainstream or independent science communities without mathematical support...” does appear to accurately reflect the way that most seem to feel today, but that is something that I sincerely believe also reflects a most unfortunate situation. Even more significantly, however, I believe that the statement that: “Papers lacking mathematical support are speculative or philosophical at best, not rigorously theoretical.” is highly inaccurate and actually reflects one of the more serious problems in “modern” physics and science today. Let me elaborate on my position further.

Mathematics Position in Good Science

Some have called mathematics the “Queen of Science”. Despite popular opinion, it is not – and it most certainly should not be thought of – as the “queen”. Despite what many appear to think, there is no inherent tie between mathematics and Reality – nor is there any inherent connection between mathematics and intrinsically valid science. Just because someone can come up with some sort of mathematical equation(s) to cover some particular scenario, that definitely does not indicate that the result must be considered a real possibility (as, unfortunately, I have seen mainstream physicists indicate more than once!). Mathematics cannot be allowed to lead the way without running into major problems somewhere along the way. The outcome for any mathematical effort is a direct result of the assumptions and resulting formulations that we manage to imbue into the initiation of that particular process – where, if we do not properly understand how the associated phenomenon (or phenomena) actually work, we will not generally be able to do so correctly. If the initial concepts and resulting equations are not developed and formulated correctly

– mathematics can lead us well off-track just as readily as it can be used to keep us on track. Thus, mathematics does not have the inherent capability to *lead* the way on its own, and therefore, it should not be considered the “Queen” of science – perhaps more like the “Chief Housekeeper”.

Alternatively, others (as in the example quoted above) have referred to mathematics as the “language” of science – that is an error that is very similar to the first one. As useful of a tool as mathematics may be (and it can be extremely valuable and useful if used correctly!) – it is only a tool. Any carpenter who tries to use only a hammer for everything that he may need to do would make for a very poor carpenter indeed. Mathematics *proper* role in science is not a language role, but more of a bookkeeping role. Only after we are able to somehow properly define what all of the various components and their interactions actually are (typically by some other means) – can mathematics then appropriately help us to keep them ordered and in proper perspective with each other. Mathematics can be very effective at helping us to understand how some interaction ends up, but only after we have first managed to figure out properly how it actually starts. Mathematics can be extremely effective at quantitatively helping us to understand better how the many phenomena in Reality act and interact – but it actually tells us little or nothing of HOW or WHY they truly do so.

What then is, or at least – should be, the true and proper language of science? Just like our regular languages, which we normally use to communicate with, it is complex and varied. Perhaps the most basically enlightening, and therefore, essentially critical element is a correct and accurate phenomenological understanding of the actual physical how and why different phenomena and interactions actually act and interact in the ways that they do – this is something that I refer to as “phenomenoscience”. Typically, some of the other more important elements are such tools as experimentation and observation, logic and rationality, – and – yes, mathematics as well can ultimately also be a very important contributor. However, mathematics is not properly as big of a part of the total language as many have tried to make it seem. Nor is it truly the “universal” language that many others have made it out to be, for without the proper phenomenological understanding behind it, it can also be very readily misunderstood and its results misinterpreted. The true, inherently significant heart of science is the physical phenomenological understanding – an understanding of the actual How and Why everything truly works as it does. Until we properly comprehend what that truly is, we cannot ensure that what we have is actually correlated correctly with Reality, and if we cannot ensure that it is properly correlated, it is not really “science” yet. Moreover – it’s not truly *good* science until we have a reasonably correct phenomenological understanding.

A correct phenomenological understanding will not be loaded with paradoxes and conundrums, for (again) despite popular opinion today; true Reality has always proven to be both rational and logical, at least – once we have finally gotten to where we truly understood it all *correctly*, it has inevitably proven to be so. Moreover – it will flow smoothly from one scale to another and cover all sizes, speeds, and complexities – and the reasons for whatever transitions in significance or influence may be encountered will be logical and well understood. There is absolutely nothing that can substitute for a good phenomenological understanding of what is really happening in Reality (which includes the very critical How and Why!). [Such insight is rarely (if ever) provided by the mathematics!] Nothing at all – if or until we have that, we are groping about blindly in the dark.

Part of the problem in “modern” physics, and it is a far more serious problem than most seem to realize, is that the capabilities of mathematics to lead the way in science have been substantially overrated. Mathematics can help greatly to keep science quantified and organized – but – it does not truly have what is needed to “lead” the way for where we may need to go next. Since what we should be striving to do is to understand Reality, that particular function is only properly and reliably truly achievable through a complete and accurate understanding of the actual, physical

phenomenological driving cause associated with any given phenomenon, process, or interaction. That is because ONLY the actual physical phenomenological comprehension will always have an inherent and valid correlation to Reality.

Mathematics is far too flexible – too adaptable – as well as too application non-specific, to show the way. Leading out with mathematics does NOT constitute good theoretical physics, but is instead, really nothing more than speculative mathematics – which can sometimes eventually prove to be rather useful, but all too often is not. There is currently far too much of such in the so-called “modern” physics, and it definitely has not led to the betterment of science. Good theoretical physics can only truly be achieved when good, careful phenomenoscience is used to show us the way that we truly need to go.

Mathematics is a fabulous tool – but, for it to serve us well, it absolutely must be used correctly!

A very serious part of the problem with physics and science today is that “we” are trying to build too much on the wrong foundation. Mainstream physics and science have been trying to use mathematics for the primary foundation for many decades now – but, as already stated, mathematics is totally inadequate for keeping science on-track with the truth of Reality.

The bottom line to all of this is simple –

Mathematics will allow many things that Reality will not – only good and careful phenomenoscience can help us to know what those critical limits and factors are.

At this point – it is no longer just the ideas and concepts that have gotten off-track – it is our whole approach to discerning the truths of Reality.

What Brought Me to This Position?

Early on – as I was seeking to understand what the nature of the problems that I saw were, I, too, kept dutifully returning to the mathematics to try to find the answers, just as I had been carefully trained to do – seeking ever to find what might be “missing” or mistaken. It took a whole lot of time, and a whole bunch of false starts and dead-ends, before I was finally able to realize fully that I was getting nowhere useful – for the answers weren't in the math! Nor were the clues that I needed to find that could help to show the way in the math either – for the true how and whys of Reality are also not contained within the mathematics. It took me even longer to realize fully why.

The most fundamental and critical reason is that mathematics is a highly flexible, capable and useful tool for the quantification of various interactions – but only after we have properly been able to discern their true nature – without that, mathematics simply has no *inherent* ties whatsoever with Reality. It can be made to serve absolutely any master, where its initial formulations, which we must create carefully from what we already know, absolutely must be valid for the final results to be valid also.

There are also some other very critical shortcomings as well. One of them is cancellation – cancellation in mathematical results will often hide some of its critical origins. Another critical one is simplification – the simplest mathematical terms, which we are taught carefully to always work our way down to, are not necessarily the right ones to finish with. If we do not properly understand what is truly happening and thus, subsequently simplify to the wrong terms out of ignorance, our math can very easily mislead us into misinterpreting the wrong conclusions out of our results.

There are other problems as well, but that will do for now.

I eventually came to the critically important realization that it was essential that the comprehension of the actual physical phenomenological how and why of the phenomena and interactions – the

phenomenoscience behind what is happening – was what absolutely had to come first, *before* the mathematics, in order for us to even be able to properly apply the tool of mathematics. It is an absolutely essential element for figuring out how to formulate the initial equations correctly. It is also critical for knowing what the critical variables truly are, as well as for being able to interpret the eventual mathematical results correctly. There is a point where the mathematics can and, indeed, *needs* to be interjected into the process, but it can be a serious mistake to do so too soon. Thus, it is that it can not only be possible, but entirely proper, for a highly valid theoretical treatise – one that is based on careful phenomenoscience – to actually have little or no mathematical support and still not just be either “mere” philosophy or speculation.

In the long run, phenomenoscience is truly the proper key and foundation to getting our physics and science right and correct with respect to Reality. Thus, I have also provided a separate paper on phenomenoscience¹, which I would recommend for the reader to read in order to understand the requirements of phenomenoscience more thoroughly. Because of the inherent requirement to work with the full complexity of Reality, phenomenoscience is probably one of the most difficult practices to get truly correct. Nonetheless, it is still critically important to keep working at it. It really and truly is an absolutely critical key element for us to get physics and science back on the proper foundation – at least, if we ever hope to get back on-track with Reality.

What All of This Means Regarding My Approach

I refuse to adopt a poor standard or mode of operation just because it is the “preferred” or “prevailing” one – especially when the reasons for which those particular preferences are promoted do not necessarily even signify or accomplish what they are “thought” to accomplish. That is especially true when some of them actually reflect part of the problem.

First of all, as I see it, the focus at this stage in the process is – and desperately needs to be – very much on phenomenoscience, for it is critical that we make significant progress on that front before we inadvertently confuse ourselves with too much focus on potentially misdirected mathematics. Too much focus and reliance on mathematics has managed to get us too far off-track from Reality already. Moreover, and this is likely to be a very difficult part of the process to gain traction on, mathematics needs to be “dethroned” as either the “queen” or “language” of physics or science. Rationality and logic need to be once more reestablished as critical and essential parts of the scientific process, where it is recognized that if the concepts fail to reach a point of consistent rationality – then it should also be understood that something *must* be wrong. On the basis that the profusion of paradoxes, conundrums, and outright irrational ideas that are so prevalent in “modern” physics do indeed indicate some very serious problems, we need to go back to the basics – as far as we may need to go in order to find whatever might possibly be throwing us off-track from the truth of Reality. Getting back to the basics here refers to both our approach to science, as well as to the concepts. Until and unless we are willing to address all of the preceding, we do not have any real hope of getting physics and science back on track. I will therefore work to keep a strong focus on some of those critical areas, and in the process, do my best to do whatever I feel is most important; all in a sincere effort to help to accomplish all of the above.

As far as references go, I do not feel that it will generally be very appropriate to have very many. Most of the ideas and concepts that I will be presenting will generally be new or novel ones – at least in their overall combination. Even if some, or parts of some, of those ideas may have been alluded to, or even suggested somewhere else by others before – that will usually not be where the ideas contained within these writings came from. Rather, they were all a part of some rather extensive personal evaluations that have spanned decades of time and some very focused efforts.

As already noted above, references are not usually really germane to new or novel ideas (at least – not if they are not based significantly on the ideas of others).

As to any references to many of the extant ideas that we may be referring to, those will mostly have a somewhat negative character, for there are some very serious problems with many of the current ways of thinking. As noted earlier, we will specifically avoid citations to references related to ideas we are criticizing, for we are only finding fault with the concepts themselves, where we feel that their authors do not deserve to be criticized, for there still was value in what they managed to accomplish. The only Exception will be where such references might somehow be truly appropriate to the discussion as noted before.

With the approaches that I have chosen to take and the areas that are covered, there are no real, truly viable shortcuts for determining the validity of the various works that I have put together. It will be absolutely critical for the reader to carefully read and ponder the details of much of what is written therein before any reasonably valid evaluation could actually be made. There are simply too many areas that deviate significantly from the common, accepted practices of today, along with some rather subtle, but significant, points to consider as well, for even a well-versed scientist to properly grasp what is written if they don't. Naturally, it would still be possible for someone to totally misjudge the value of what is presented, for that is always a very real possibility, as well as very human. However, what we are trying to point out and to emphasize here is that: if anyone tries to make such a judgment without carefully reading through and carefully considering the material that is presented therein, it would be virtually impossible for them to make a truly valid and accurate assessment.

Conclusions

In seeking to evaluate the value of some new work or treatise that one might be considering to read, it is most important that we use truly valid criteria in trying to decide whether or not we should do so. If we do not, we are bound to overlook some critically valuable or important works somewhere along the way. This can be a particularly serious dilemma when there are a great many new works to consider. The only truly valid approach is to read the entire work completely and carefully, without bias – which can be rather time-consuming and challenging. A second-best approach, though not entirely valid, is to review at least the summary parts of any topic works of interest (such as, for example, the abstract, introduction, and conclusions) before deciding whether or not to pursue it further. Such an approach is only second best, from an exploring for the truth standpoint, because it leaves open a very real possibility that some very good or significant works could still be overlooked.

There are a number of approaches that are often used to dismiss a variety of works, somewhat erroneously, where some of those works may actually be good, while others of them could be only very poor or of no real value at all – without any truly valid consideration of what is actually contained therein. Among those approaches, some of the most widely accepted are the number and type of references provided in the work, and how much supporting mathematics may happen to be present in that work. Any such dismissals based on such criteria alone are questionable at best – and potentially deeply flawed at worst.

Mathematics should not properly be considered to be either the “queen” or the “language” of science as it is far too often thought to be. It is the wrong tool for either leading the way or for providing the crucial foundation for our efforts – the best candidate for that is phenomenoscience. We will therefore focus almost entirely on phenomenoscience (with only as much mathematics as is absolutely necessary). We will also include references only when they are truly germane, which is far less than that to which most are generally accustomed. Our focus is on seeking out the truth

and presenting it in a manner that is truly proper and appropriate – our approach is therefore set to try to accomplish that in the most expeditious and valid manner, which means, with a lot of direct phenomenoscience involved in the process and relatively limited mathematics at this stage.

Finally, because many of them are so basic, the problems in “modern” physics, as well as the science that is built upon it, are more pervasive than most are even willing to consider. Thus, getting the serious attention of mainstream physics is a rather challenging venture. Even the commonly accepted basic approach to theoretical physics is seriously flawed, for most consider mathematics to be the essential foundation and language of physics and science. Until we fix that problem and get the proper foundation in place – we will not be able to succeed.

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References

[1] T. B. Bon, *Phenomenoscience – The Key to the Proper Development of New Concepts in Science*, published on-line at the following web site: <http://tbbon.net/discuss.html>, 2010.