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Why Theoretics?

Theoretics: the field of study which utilizes creative thought, disciplined logic, and the current knowledgebase to develop credible scientific theory.

by Dr. James P. Siepmann, Editor-in-Chief

Though there are many courses at our colleges and graduate schools to teach us how to undertake and perform experiments for the various realms of science, there is a notable lack of courses to teach us theory development. Hence the need for Theoretics. Theory can no longer be left as an afterthought of experimentalist, but rather it needs to be the **basis** for experimentation.

Theoretics is a field separate (albeit integrated) with experimentation, not only because good theory development is actually quite complex and intricate, but also because the people who make good experimentalists rarely make good theoreticians and visa versa. Theoreticians usually possess a more creative and unbound mind (e.g.. Einstein) while the experimentalist maintains a more meticulous and practical mindset (e.g. Edison).[1] Rarely are the creative theoretical mind and the meticulous experimental mind contained within the same skull. So what we currently have are experimentalists trying to do theory development, and (excuse my candor) not very well.

Not only do most science journals require the focus of a paper to be an experiment or a statistical analysis of data, but about half of all the scientific articles published today contain at least one error of theory, either in logic or form. This is not acceptable. The implementation of Theoretics' principles need to be done prior to any experimental undertaking, not only because it puts the "cart before the horse" but it will also help to determine the experimental methodology that should be used.

Theory can also be the subject of a paper by itself, and I would submit that such "papers of theory" advance Science* much more than "papers of experimentation". In order for a theoretical paper to be worthy of publication though, it must be able to remain valid in light of current scientific evidence and also be able to explain such data at least as good as the theory that is currently accepted.

Most of today's journals consist of papers where an experiment is undertaken in order to validate a single argument hypothesis. Such papers are undertaken to define or redefine some minuscule aspect of a sub-sub-sub-(and so on)-division of Science. Worse yet is that the more encompassing new theories are usually shunned unless they fall within the special/general relativity and quantum theory realms and are written by someone whom academia deems acceptable (papers today are usually accepted based upon who wrote it, rather than its merit). For instance, gravity can be explained if we accept the postulate that Space** is some sort of an aether rather than a vacuum or void. In fact, it can explain more of the gravity knowledgebase than general relativity and/or any other field theory.[2] But even though such theories can be just as valid (if not more so because they can explain more of the scientific knowledgebase) than currently accepted dogma they are rejected on their face by most journals and academics.

Why is the status quo so adamantly defended by the powers that be (academia and those who have the approval of academia)? The answer is: comfort and self-preservation. Comfort with the tried, and sometimes true, current dogma. A valid new theory causes a period of cognitive dissonance in those who need to understand and incorporate it into their mental framework. Also the more encompassing a new theory is, the greater discomfort there is to its acceptance. Just ask Galileo.

One's age can also affect how quickly a new theory is accepted. The saying "You can't teach an old dog new tricks," is based on the generalization that the older a human being is, the less adaptable they are to change. Though there are always notable exceptions to most generalizations, this one is holds true for the majority of individuals for neurophysiologic and psychological reasons. Don't believe me? Just look at someone's VCR, if they are over 50 years old, it is likely that it is set incorrectly (often blinking 12:00) while if they are under 30 years old, their VCR is more likely to the correct time.

In addition to the aforementioned mental inertia problem, there is the added bias against new theories because most experimentalists are funded based on current dogma. Their area of study, grants, lab equipment, and staff are all geared towards current theory. Such an investment of time and capital is difficult to through out the window. Also any regearing for a new theory would not only take money but time; time where one would be unable to publish and as a consequence may perish. Significant change in scientific theory seems to almost be a catastrophic event (in the Darwinian sense), as it forces scientists to either evolve or become extinct (via obscurity or retirement).

Just look at "gravity waves". Even though gravity waves can be logically shown not to exist (see the Addendum below), the amount of time, effort, and articles devoted to this current dogma is amazing (e.g. LIGO[3]). We are therefore left with keeping current theory even though it has been invalidated while the valid theory is kept on the back burner or worse. This not only causes scientific stagnation but it causes some current and future endeavors to go down the wrong path.

Theory is the wheel that the ship of experimentation needs in order to steer a true course (which incidentally is where our logo below came from) and Theoretics is not only the field of theory development but also its practical application (e.g. gravity waves). Who could deny the positive impact there would be if the field of Theoretics were to be formalized into our centers of higher education as well as in the scientific community at large. Who could argue against it?

Disclaimer: The above arguments were made by an expert in Theoretics and should not be attempted without adequate training and supervision. The Journal of Theoretics is not responsible for any injury to one's preconceptions, biases, or invalid arguments that may occur to any experimentalist with inadequate training in Theoretics.

***** I use the capitalized version of "Science" when I am discussing that which is ultimately knowable about the nature of the universe. Because this has existed since the creation of the universe (if not longer) and its basic nature is constant (it is our attempts to understand that are constantly changing), it can be defined as a unique entity deserving of proper noun usage. The term "science" is otherwise utilized for its usual and indiscriminate colloquial use. For a more in-depth discussion, you may want to read the Aug/Sept 1999 editorial, "What is Science".

****** I define the term "Space" with a capital "S" when I am referring to the physical entity that exists (albeit beyond our senses and current means of analysis and observation, thereby forcing us to divine its existence indirectly, such as in the case of light's path being bent around a mass) rather than its more typical reference to some type of a void.

References:

1. Siepmann JP, "Theory + Experimentation = Scientific Progress", Journal of Theoretics Vol.1-1.

2. Siepmann JP, "The Laws of Space and Observation", Journal of Theoretics Vol.1-1.

3. Laser Interferometer Gravitational-Wave Observatory (LIGO).

Addendum:

The following is a proof that gravity waves do not exist:

If we were to accept that gravity is a wave and all waves require a medium for propagation*, then gravity requires a medium for propagation. And if gravity propagates through space when all other physical matter is absent and all waves require a medium for propagation then space must be a medium for gravity wave propagation. And if space is a medium and all mediums must physically exit then Space physically exists (i.e. aether).

By using logic, we can see that a theory which postulates that Space physically exists (i.e. aether) then it could explain all current knowledge and data about gravity as shown below:

If we accept the proposition that space physically exists (as Space) and is adherent to itself while resisting physical displacement by matter/energy, then it would follow that a force would be exerted by the encompassing Space toward said matter/energy. Such a force could then explain gravity without the "Rube-Goldberg" explanation that is needed for gravity waves; in fact, it would preclude the existence of gravity waves. So what makes more sense a simple theory that is valid for all known data, or a tenuous and complicated gravity waves theory which does not answer all known data unless one adds on many caveats. I'll take Ockham over Goldberg any day.**

Therefore if gravity waves are subsequently found then the proposition that Space physically exists would be invalid and I would be the first to admit it, but until such gravity waves are found, this theory remains valid (albeit disregarded by the academic elite as it violates their accepted current dogma). So even without physical experiments, we have been able to prove that gravity waves do not exist and that space most likely exists as the physical medium "Space" (aether) with but a few short paragraphs of Theoretics. Not bad.

* For those of you who may wish to argue that the photon is a wave and yet it does not require medium, I would argue that the photon is a particle which has some characteristics similar to that of a wave (just because two things may have some similar characteristics, it does not necessarily follow that they are both waves). I would also go further by saying that even if the photon was shown to be a wave, it does not preclude space from being a physical entity because one could also say that this photon (wave) was traveling through a medium (Space). My argument would still be valid.

** **Ockham's razor** is the doctrine "Pluralitas non est ponenda sine necessitate," which translates "Plurality should not be assumed without necessity," or in today's lingo, "The simplest explanation is more likely to be correct." It has been attributed to the medieval philosopher William of Ockham (born England 1280-1285, died Munich Germany 1347-9) not because he thought of it, but rather because he used it the most. **Rube Goldberg** (Reuben Lucius Goldberg 1883-1970) on the other hand was an American cartoonist who was well known for his cartoons with bizarre and complicated machines. His name became synonymous with any simple theory, process, or device that was made outlandishly complicated.

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