

## Occam Engineering and Physics

sgm, 2018/NOV/26

An example of using Occam's razor in physics:

1. physics assumes 4 forces of nature including a 'weak force' responsible for radioactive decay of nuclei
2. that 'weak force' is mediated by 'intermediate vector bosons' – as part of the assumption – that forces are mediated by bosons
3. in the spirit of Occam, the simplest explanation tends to be correct, the *simplest explanation* of radioactive decay is *without mediation* – no bosons

Conventional physicists want us to admire simplicity and elegance – yet – also want us to accept *what they dictate* in terms of core assumptions relating to the Standard Model. Scientific fascism.

Engineering: ask an engineer to do engineering without matrices nor complex numbers – they would scoff and exclaim: "Ridiculous!" However, that does *not* imply that matrices and complex numbers are somehow 'built in' to our physical reality; matrices and complex numbers are *tools* we use to understand physical phenomena, nothing more.

Engineering: impedance is used to understand electromagnetic propagation in *diverse* media – with *specific* impedance associated with *each* media *defining* electromagnetic propagation within that media. No surprise that space has impedance, 377 ohms, a measure of generalized resistance.

Engineering: elasticity is used to understand a measure of physical deformation of solids – in the most simplistic sense – linear – relating force and displacement.

Physics (General Relativity): space-time is deformable based on mass concentrations/density which implies *time* itself is deformable / *has elastic properties*.

Occam: Relativity can be simplified such that time is the *only* independent variable regarding gravitation; a temporal gradient implies an acceleration gradient – and is necessary and sufficient to explain gravitation.

Physics + Occam: time is the *exclusive* variable on which gravitation depends – and has *one property, elasticity*.

Engineering + Physics + Occam: space has impedance; time has elasticity; this model of space-time is minimally necessary and sufficient to explain gravitation.

Since gravitation and the strong-nuclear forces are both exclusively attractive, you could conceivably integrate them into a super-force, gravistrong, without bosons. But this would necessitate discarding large chunks of the Standard Model:

1. gluons
2. color force
3. quarks

and physicists are disinclined to 'go backwards' when it comes to their precious Standard Model. Also, another disinclination is regarding the impedance of space: in engineering, that was calculated using the concept of 'ideal transmission line' which physicists question the assumption – that space corresponds to an ideal transmission line. And impedance reminds them of 'the ether' – a concept long-ago determined invalid. So even if you could convince a physicist to accept temporal elasticity, fat-chance they'd also accept the impedance of space – as a valid physical concept.

So for expediency, let's temporarily 'discard' impedance and focus exclusively on time:

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There are two kinds of progress in science and technology:

1. incremental
2. quantum leaps

Examples of 1 are: incandescent light bulbs replacing candles/lamps, florescent lights replacing incandescent, televisions replacing radios, flat-screen TVs replacing vacuum tubes, telegraph replacing courier, telephone replacing telegraph, internet video-phone replacing telephone,...

Examples of 2 are: travel by aircraft vs travel by horse-and-buggy, communication by internet video-conferencing vs hand written notes, nuclear reactors vs camp-fires, landing on the moon vs landing on your feet,...

I understand the reluctance/reticence of physicists regarding the impedance of space, but temporal elasticity should be a concept they have *no* hang-ups about. It was derived/discovered based on the classic concept of linear elasticity – a concept almost 400 years old. Relativity, although not as old, has similar respect in physics compared to the path-integral formulation of quantum field theory, courtesy of Richard Feynman. So the argument above regarding temporal elasticity should have no objectors. My real question is: who amongst convention would be willing to actually *endorse* the concept?