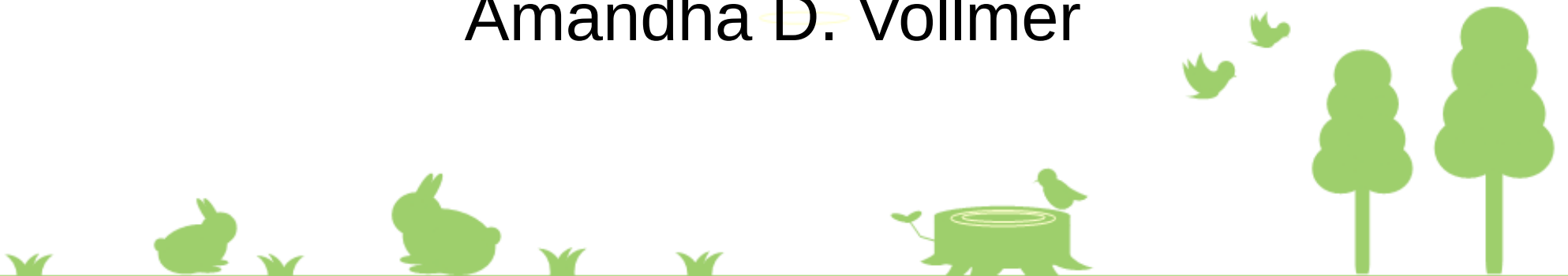


The Scientific Paradigm Shift

A Review of the Book
The Structure of Scientific Revolutions
By Thomas S. Kuhn
Through the Lens of the
Current Scientific Revolution

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Who Was Thomas Samuel Kuhn?

- Ohio 1922-1996
- Math, radar, Physicist, scientific historian and philosopher of science.
- 1962 Book *The Structure of Scientific Revolutions*
- was influential in both academic and popular circles, introducing the term “paradigm shift“, which has since become an English-language idiom.



Patterns

- “Only when they must choose between competing theories do scientists behave like philosophers.”
- — Thomas Kuhn, *Logic of Discovery or Psychology of Research?* (1970)
- He had his blind spots but he could recognize patterns and the theory seems to hold true to historical merit.



Normal Science

- coined the term “normal science” to refer to the relatively routine, day-to-day work of scientists working within a paradigm, and was largely responsible for the use of the term “scientific revolutions” in the plural, taking place at widely different periods of time and in different disciplines, as opposed to a single “Scientific Revolution” in the late Renaissance.



Clearing up Myths

- Science does not naturally move toward truth.
- Science does not progress linearly by accumulating theory-independent facts (Development by Accumulation), although it could have and learned by it. Instead it is often discarded as out of date.
- These days, science seems synonymous with industry.
- Pure or foundational (working) sciences are assumed and rarely rechecked.
- Once you have this foundation of principles, whether correct or not, the remainder of normal science builds upon it.
- You shall know goodness or evil by their fruits – fruits take time to develop.



Misaligned Theories

- The paradigm remains constant before going through a paradigm shift when current theories no longer line up with certain phenomenon and someone enters to propose a new theory.
- The scientific revolution occurs when:

The new model offered is closer to the objective and explains the observations more accurately and the new paradigm is incommensurate (disproportionate) with the old.



The Necessary Divide

- It makes sense then, that there will become two almost seemingly radically opposed or opposite ideas coming to a head where one must battle it out with the other.
- We are seeing this currently between many who went through the strict training of the modern and commonly accepted paradigm, through traditional Rockefeller Big Medicine cookie cutter medical schools.



Paradigm Friction

- The divide creates a friction or pressure, the friction akin to that upon a slipping tectonic plate. Without the friction there could be no change. Energy is created from this rift, this stirs up discussions, even if it creates controversy, this means a festering has come and all parties must now confront it, although there will be many cowards who will runaway from true debate or discourse. By their fruits, these ones are generally the types found on the narcissist spectrum and they will never change.



Layers to Knowledge

- For example, virologists, akin to any hyper-intellectual left brain dominant types that have a well exercised ego. In many there can be an imbalance with access to their inner knowing. It seems there is not much discussion about other ways in which we can find answers besides flawed methods, like the peer review process (which is rife with cronyism/nepotism) And even the scientific method is easily massaged via statistical tinkering among other methods.



Other Ways of Knowing

- We are graced with instantaneous knowing, like how we see child prodigies display their talents. They simply know. There was no process of A to B for that to occur. No reductionism was required.
- Another lost natural skill: the innate knowing of natural law and I would argue Divine law. The knowledge that comes when you connect with nature and awareness that comes when you connect within your inner self.
- Viktor Schauberger is a prime example of someone who studied nature intimately and mimicked those designs producing extraordinary inventions. Like the creation of saucer technology.



Cultural Friction

- The lifestyle becomes deeply embedded. The achievements, recognition, naming compounds and processes after themselves...because of the time devoted to it and the ideologies that form around it, as well as the culture that blooms from it, even to the ways of worship, belief and other emotionally tied aspects, relationships, financial connections, agendas, etc. There are many reasons the lie is held onto, tightly. Some have PhD's in Tinker Toy Manufacturing. The good news is that some of that science can be re-framed with the more accurate explanation translating it, so not all is lost.



Non Programmable

- (generally only 10% are not as programmable, those who have strong management over their conscious and subconscious minds)



History of Science

- Scientists carry a worldview or “paradigm”
- A paradigm is a universally recognizable scientific achievement that can solve certain model problems and a seemingly variety of solutions to problems. Right or wrong.
- A paradigm is a basic framework of assumptions, principals and methods from which the members of the community work.



Product of Society

- Thomas Kuhn showed contemporary philosophers could not ignore the history of science and the social context in which science takes place. Science is a product of the society in which it is practised



The Model Can Be Wrong

- Ball earth is the wrong model, germ theory is the wrong model, gravity is the wrong model, evolution is the wrong model, biology is the wrong model, but they have had their achievements, incorrect as they may be— essentially a cult-like ritual forms around them, in the giving of a prize, like Nobel, for how tidy and creative they were with the leaps of faith from one idea to the next. Cohesiveness of all the fantasy pieces is desired over double checking all the evidence. Fanfare over facts.



The Kuhn Cycle (insert irony here)

5 Phases of Science

- Phase 1 - Pre-Science – This only occurs once, or does it?
- No consensus, disorganized and diverse activity, constant debate over fundamentals, many theories as are theorists, no commonly accepted observational biases (observer bias happens when a researcher's expectations, opinions, or prejudices influence what they perceive or record in a study)



The Kuhn Cycle

- Phase 2 – Normal Science

Most common – “stable” science

- A paradigm is established – legitimate work can occur – solving puzzles
- Puzzles that resist solutions are seen as anomalies.
- Anomalies are tolerated and do not cause rejection of the theory. Scientists feel over time explanations will come to light.



The Kuhn Cycle

- If each paradigm defines its own puzzles, what is a puzzle for one paradigm may be no puzzle at all for another.
- Some scientists spend all their time in model drift, battling some anomaly and some may not even realize it.
- Normal science needs to be uncritical. If all were critical of a theory and worked on trying to falsify it, no detailed work would occur.



The Structure of Scientific Revolutions

- “Normal Science, the activity in which most scientists inevitably spend almost all of their time, is predicated on the assumption that the scientific community knows what the world is like. Much of the success of the enterprise derives from the community’s willingness to defend that assumption, if necessary, at considerable cost. Normal Science, for example, often suppresses fundamental novelties because they are necessarily subversive of its basic commitments” (Kuhn, 1996, p. 5).



The Kuhn Cycle

- Phase 3 – Crisis
- This is where the shift occurs
- Anomalies become serious and a crisis develops – this is our Covid false flag event. Those of us who see through the lies and all the damage that is done in the name of said lies now cannot sit idle. The paradigm has lead to immeasurable suffering and death, the anomalies are glaring.



Phase 3 - Crisis

- Ideas that challenge the existing paradigm are developed.
- In a crisis there will be “extraordinary science” where there can be several competing theories – some can be wildly off point but most are blends of both paradigms, generally a bargaining stage for many. For example many try to argue that viruses exist but don't hurt you. Those who are in the corrected paradigm know that there have been layers of mischaracterization of particles and artifacts but no “virus” has ever been isolated, its genetic material fully extracted and labelled, or it purely shown to cause any disease process when placed in a healthy participant.



Phase 3 - Crisis

- If the anomalies can be solved, the crisis ends and normal science resumes.
- If not, a scientific revolution ensues that eventually will involve a change of paradigm.
- This process can take time however I feel the false paradigms take longer to push through against the true ones than the other way around.



The Kuhn Cycle

- Phase 4 – YOU ARE HERE
Paradigm Shift and Revolution
- Eventually a new paradigm will be established but not due to any compelling logic.
- The choice of paradigm could be for psychological and sociological reasons.
- The new paradigm will best explain the observations offering a model that seems closest to objective reality.



The Kuhn Cycle

- Phase 5 – Post-Revolution -
- The new paradigm's dominance is established.
- Scientists return to normal science and solving puzzles inside the new paradigm.



Taxonomy

- Years after the publication of *The Structure of Scientific Revolutions*, Kuhn dropped the concept of a paradigm and began to focus on the semantic aspects of scientific theories. In particular, Kuhn focuses on the taxonomic structure of scientific terms. As a consequence, a scientific revolution is not defined as a 'change of paradigm' anymore, but rather as a change in the taxonomic structure of the theoretical language of science.



No Natural Measure

- Any scale of paradigm can occur, could be large or small. Currently ours is very large with a chain reaction effect causing paradigms in multiple disciplines showing glaring anomalies. In this case our entire philosophy is shifting with a broad effect.
- Acceptance or rejection of some paradigm is a social process as well as a logical one.



Keep Teaching

- Younger Scientists take a new paradigm forward so the best thing is to work on educating the next generation – those stuck in their ways will extinct themselves out.
- As Kuhn put it, “a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it.”



Popper

- Cultural aspect of the social media experiment – isolated people needing attention and validation.
- Karl Popper - we must start with some a priori knowledge to be able to generate new knowledge. Observation is always done with some hypotheses in mind — we can't understand the world from a totally blank slate.
- Scientists utilize past experience which is full of bias and induction, and try to pass it off as deduction.



Out of Date

- “Out-of-date theories are not in principle unscientific because they have been discarded. That choice, however, makes it difficult to see scientific development as a process of accretion.”
- — Thomas Kuhn, *The Structure of Scientific Revolutions* (1962)



Inductive vs Deductive

- Inductive reasoning – pattern recognition and prediction based on a set of premises (experience) – then forming a conclusion – can be flawed because the conclusions drawn go beyond the information contained in the premises.
- Deductive reasoning The Scientific Method– a conclusion only from the premise – reductionism, however if the premise is incorrect, it all is wrong.



Inductive vs Deductive

- Inductive reasoning involves starting from specific premises and forming a general conclusion, while deductive reasoning involves using general premises to form a specific conclusion.
- Both can be in error.
- Sherlock Holmes Abductive Reasoning – probable but uncertain conclusions



The Importance of Falsifiability

- Here was the salient problem: The proponents of these new sciences saw validations and verifications of their theories everywhere. If you were having trouble as an adult, it could always be explained by something your mother or father had done to you when you were young, some repressed something-or-other that hadn't been analyzed and solved. They were confirmation bias machines.
- What was the missing element? Popper had figured it out before long: The non-scientific theories could not be falsified. They were not testable in a legitimate way. There was no possible objection that could be raised which would show the theory to be wrong.



Karl Popper

- I found that those of my friends who were admirers of Marx, Freud, and Adler, were impressed by a number of points common to these theories, and especially by their apparent explanatory power. These theories appeared to be able to explain practically everything that happened within the fields to which they referred. The study of any of them seemed to have the effect of an intellectual conversion or revelation, opening your eyes to a new truth hidden from those not yet initiated. Once your eyes were thus opened you saw confirming instances everywhere: the world was full of verifications of the theory.
- Whatever happened always confirmed it. Thus its truth appeared manifest; and unbelievers were clearly people who did not want to see the manifest truth; who refused to see it, either because it was against their class interest, or because of their repressions which were still 'un-analysed' and crying aloud for treatment.



Examples of Pseudo-Science

- Confirmation bias – a perfect example of this is Jason Breshear's information – not falsifiable – you must be able to prove it wrong.
- One can sum up all this by saying that the criterion of the scientific status of a theory is its falsifiability, or refutability, or testability.
- Specific testable predictions are required.



Desire to Be Right

- The desire to be right and the desire to have been right are two desires, and the sooner we separate them the better off we are. The desire to be right is the thirst for truth. On all counts, both practical and theoretical, there is nothing but good to be said for it. The desire to have been right, on the other hand, is the pride that goeth before a fall. It stands in the way of our seeing we were wrong, and thus blocks the progress of our knowledge.



Cognitive Short Cuts

- “What the human being is best at doing is interpreting all new information so that their prior conclusions remain intact.”
— Warren Buffett
- We prefer cognitive short cuts.
- In “The Case for Motivated Reasoning,” Ziva Kunda wrote, “we give special weight to information that allows us to come to the conclusion we want to reach.”



Truth as Social Construct

- As Rebecca Goldstein wrote in *Incompleteness: The Proof and Paradox of Kurt Godel*:
- All truths — even those that had seemed so certain as to be immune to the very possibility of revision — are essentially manufactured. Indeed, the very notion of the objectively true is a socially constructed myth. Our knowing minds are not embedded in truth. Rather, the entire notion of truth is embedded in our minds, which are themselves the unwitting lackeys of organizational forms of influence.



The Mind of the Author

- From 1948 to 1956, Kuhn taught a course in the history of science at Harvard at the suggestion of university president James Conant. His encounter with classical texts, especially Aristotle's *Physics*, was a crucial experience for him. He realized that it was a great mistake to read and judge an ancient scientific text from the perspective of current science and that one could not really understand it unless one got inside the mind of its author and saw the world through his eyes, through the conceptual framework he employed to describe phenomena.



Definition

- “Scientific revolutions are inaugurated by a growing sense... that an existing paradigm has ceased to function adequately in the exploration of an aspect of nature to which that paradigm itself had previously led the way.”
- — Thomas Kuhn, *The Structure of Scientific Revolutions* (1962)

