

**2. “Every theory destabilizes as much as it solidifies our view of the world”**

**(Nathan Jurgenson). Discuss.**

Word Count: 1597

Without John Maynard Keynes, our view of the world through the lens of economic reasoning would be significantly different. Keynes is well known and most influential for developing the Keynesian aggregate demand model which opposed classical views. Additionally, he was first to advocate the use of fiscal policy in order to stabilise the economy. When addressing the development of ideas, he said “The difficulty lies not so much in developing new ideas as in escaping from old ones.” The quote indicates the need for knowledge development and the difficulty in “escaping” from “the old” knowledge. However, what does this “escaping” consist of? For knowledge to progress, our current knowledge must alter in some aspect and the alteration is the escape Keynes refers to. By altering our current knowledge our knowledge can progress. The statement “every theory destabilizes as much as it solidifies our view of the world” made by Nathan Jurgenson, addresses knowledge development through theories, specifically how theories destabilise and solidify our knowledge. This essay will examine Jurgenson’s statement through the areas of economics and physics. “Every theory” refers to tested general propositions which form shared knowledge. However, within this essay, an economic theory refers to an economic model which attempts to predict human behaviour and decision making. In physics, theories are physical models which justify physical phenomena. These definitions of theories form our current shared knowledge which is discussed in the statement as “our view on the world”. Most significantly, the statement refers to the solidification and destabilisation of knowledge, implying because of theories, our prior knowledge is undermined, developed and or improved in some respect. Through the essay, the extent of the destabilisation and or solidification will be explored.

In his book *Capital in the Twenty-First Century*, Piketty explores capital and its relation to the ever growing issue of inequality. Regarding wealth distribution, Piketty reveals powerful mechanisms of convergence through knowledge diffusion and divergence caused by low growth and high capital returns (Piketty, 2014, pp. 21-23). Piketty explores this by investigating the claims of Ricardo and his principle of scarcity, Kuznet and the reasoning of the Kuznet Curve and most significantly Marx and his model of The Principle of Infinite Accumulation. Each of these models destabilised the earlier predictions, but solidified economic theory, despite their flaws due to the difficulty of economic determinism. Marx adopted the price of capital and the principle of scarcity from the Ricardian model as the basis of a more thorough analysis of the dynamics of capitalism (Piketty, 2014, p. 9). However, Marx formed his model by destabilising Ricardo's model. By doing so it solidified economic understanding and rectified Ricardo's model. This led to Marx's famous prediction regarding advancement. "What the bourgeoisie therefore produces, above all, are its own gravediggers. Its fall and the victory of the proletariat are equally inevitable" (Piketty, 2014, pp. 8-9). However, Marx neglected the possibility of durable technological progress and gradual increased productivity, both of which are forces that act to counter the process of accumulation and concentration of private capital (Piketty, 2014, p. 10). Without these counteracting forces, Marxist principle of infinite accumulation equilibrium was flawed and prediction was more apocalyptic than actuality. As a result, later predictions such as Kuznet's prediction that "growth is a rising tide that lifts all boats" were very optimistic and were flawed (Piketty, 2014, p. 11). Despite the faults, the theories solidified our knowledge. Marx brought the problem of wealth concentration to the forefront and highlighted growth cannot adequately counterbalance the concentration of wealth (Piketty, 2014, p. 10).

Likewise, Kuznet's prediction was flawed and was destabilised. However, he was the first to derive his prediction through analysis of income distribution statistics (Piketty, 2014, p. 14). Therefore, his methodology solidified our economic understanding as, preceding economists would utilise statistical data regarding income to formulate predictions and models. Despite all the flaws in these economic models that were highlighted by preceding economists and historical events, they solidified our economic knowledge and understanding in some aspect through the destabilisation.

In the natural sciences, paradigm shifts indicate a conceptual view of the scientific model being replaced or expanded upon by an alternate view. Within physics, one of the most significant transitions was from classical physics to modern physics. Within the classic model construct, no preferred frame of reference existed and the physics was assumed to be the same as it was not dependent on those undertaking the experiments (Robson, 2013). Therefore, when Einstein disputed it and proposed a new model which stated there was no preferred frame of reference and the reference frame of the observer or object gave the different physical quantities, Einstein's theory destabilised our previous knowledge and our view of the world regarding mechanics (Robson, 2013). However, his theory solidified our knowledge by enhancing our objective understanding through a physical model which better encapsulates the universe's mechanics. Einstein's theory led to further discoveries and improvements in understanding. Relativistic effects are relevant for explaining phenomena such as detecting muons formed in the atmosphere (Burchell, 2016). Without Einstein's theory incorporating relativistic effects, this new understanding would be unobtainable and therefore in this aspect Einstein's theory further solidifies. However, with any theory, the extent of the solidification and destabilisation is



dependent on the importance placed on the knowledge. Thus, the perceiver is significant in determining the extent of the destabilisation and solidification.

In the previous examples, the economic and physical models destabilised and consequently solidified our knowledge in some aspects. However, this knowledge development process is not universal. For instance, kinetic energy when commonly used consists of a half multiplied by mass multiplied by velocity squared (Homer & Bowen-Jones, 2014, pp. 66-67). This equation is adopted universally due to its simplicity, despite discovering further components which define and form kinetic energy holistically. The expanded equation calculates the kinetic energy of particles at high velocities (Fowler, n.d.). However, these components are excluded from the kinetic energy equation because in most circumstances, they are negligible.

Therefore, the additional factors of kinetic energy do not destabilise our knowledge regarding kinetic energy because our previous understanding of kinetic energy is not affected. Even after the discovery, the simplified equation is still applicable and viable. However, it further solidifies our knowledge of kinetic energy as our understanding is more complete. Therefore, it does not destabilise our shared knowledge, especially the accessible knowledge most can comprehend because the prior knowledge and formula is still viable, yet, the physical model in which we use to describe kinetic energy is solidified.

Similarly, the conventional current model assumed current flowed out of the positive terminal, through the circuit and into the negative terminal of the source and was the adopted model during the discovery of electricity (Homer & Bowen-Jones, 2014, pp. 187-188). However, it was proven to be wrong. The electrons instead flowed out of

the negative terminal and into the positive terminal of the source (Homer & Bowen-Jones, 2014, pp. 187-188). Consequently, for theories and models related to electronics, the discovery of the electron flow solidified understanding, but does not destabilise because it was largely only a change of sign. Therefore, the model is still applicable and the knowledge was minimally destabilised while our understanding has been solidified. The destabilisation was required to progress our knowledge and therefore the destabilisation has no significant ramifications. Thereby the solidification brought about by the new model, has a greater effect on our knowledge than the destabilisation of the prior knowledge, especially as the prior knowledge is still applicable.

Within economics, Keynes reshaped our view on aggregate supply through the introduction of the Keynesian aggregate supply model. His model came to fruition as a result of the great depression and opposed aspects of the adopted view of the time, the classical model (Nash, 2017). The classical view, adopts a straight line curve on the basis that the economy is at its full employment level, while the aggregate supply curve is upwards sloping because wages and prices are less flexible in the short-run in the Keynesian model (Tragakes, 2012, pp. 250-254). Keynesian's model revolutionised our views regarding aggregate supply, providing another viable view on aggregate supply and led to the implementation and recommendation of policies such as fiscal policy. The Keynesian model did not replace the classical view but rather supplemented it as both are applicable and together form a more holistic view on aggregate supply. Therefore, the introduction of the Keynesian aggregate supply model did not destabilise the knowledge previously possessed regarding aggregate supply. The classical view is still applicable and the classical view was only destabilised by not being the only model

to explain aggregate supply. However, by having this competing theory, our view on aggregate supply solidified and developed our knowledge. Therefore, our view of aggregate supply was not destabilised but rather solidified by furthering our knowledge while our previous views were minimally destabilised.

It has been seen, the solidification and or destabilisation of knowledge is dependent on the circumstance and the effect the solidification or destabilisation has on our knowledge. The need for knowledge development through theories and consequently models, causes the destabilisation and solidification as, new models either debunk, alter or build upon previous theories to form new knowledge. Accepted models solidify knowledge as, after the implementation of the model, objectively our shared knowledge has become more developed, accurate and comprehensive. Likewise, models can always destabilise our knowledge, as models alter our prior knowledge and theories as part of the knowledge development process. However, the extent of the destabilisation is determined by the previous knowledge and the knowledge newly acquired. The significance of the prior knowledge will determine the extent of the destabilisation while the new knowledge will determine the extent of the solidification. Therefore, the extent of the destabilisation or solidification is dependent on the importance placed on the prior and new knowledge which is being effected. However, despite whether theories solidify or destabilise, the process is necessary to achieve the “escape” Keynes references and to obtain new knowledge.



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