
UNDERSTANDING THREE KEY CHRISTIAN DOCTRINES THROUGH KUHNIAN INSIGHTS

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Abstract

Just over 50 years, in 1962, Thomas Kuhn wrote 'The Structures of Scientific Revolutions'. It was a landmark publication as it challenged the prevailing view of the way it was thought Science advanced and progressed. For Kuhn, a theory was maintained but not determined exclusively by logical processes. He believed that normal science is often conducted within a certain paradigm or worldview. At times, anomalies may threaten this paradigm which can eventually lead to a revolution where grand new theories and concepts can be accommodated. The aim of this paper is to show that some of Kuhn's ideas on the way Science progresses can also be applied to three key Christian doctrines. This study is not comprehensive in nature, but by showing how Kuhnian concepts can be applied to this area of Theology, another step in the dialogue between models from the Philosophy of science and faith can be taken. The three doctrines to be discussed are: the doctrine of original sin, the doctrine of the Trinity and the doctrine of justification.

Keywords: Thomas Kuhn, original sin, trinity, justification, philosophy of science

1. Background on Thomas Kuhn's structures

Just over 50 years, in 1962, Thomas Kuhn wrote *The Structures of Scientific Revolutions*. It was a landmark publication as it challenged the prevailing view of the way it was thought Science advanced and progressed. Kuhn was an American physicist, historian and philosopher of Science. He initially studied Physics, but as a fellow in Harvard, he was given the freedom to move to History and Philosophy of Science and Philosophy, where he made his greatest contributions. He is primarily known for arguing that truth, or at least the notion of scientific truth, can never be truly measured solely by objective means [1]. Rather, there is a consensus which arises within the scientific community. The growth of scientific knowledge is littered with competing theories battling for supremacy. In formulating objective knowledge, there remains some subjectivity which is underpinned by one's worldview. Two people using the same data might utilise theories which differ greatly in the interpretation of that data. Kuhn believed Science is not only about perception,

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but cognition also plays a part, thereby distinguishing and discerning the observation from the surrounding environment. For Kuhn, a theory was maintained but not determined exclusively by logical processes. Ian Hacking in the preface of the fourth edition of Kuhn's classic text identified 6 key sections therein. These are: Normal Science, Puzzle-Solving, Paradigm, Anomalies, Crisis and Revolution.

Normal Science is defined as "research based firmly upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice" [1, p. 10]. There is a type of indoctrination and subtle censure which prevents challenges to the status quo or leaves room for other opinions.

Puzzle-solving follows on from normal science. It is the notion that research takes the question of puzzles. There are no new grand theories or concepts developed, but rather there is a steady increment of new knowledge being acquired; but without too much thinking outside the square.

A paradigm is the framework which underlies the worldview by which research is carried out. It subsumes a set of presuppositions and assumptions which are taken as axiomatic and not challenged. In defining a paradigm, there exists a community or group of scientists who are in agreement and share some beliefs relevant to their work. Kuhn defined it in the following manner: "A paradigm is what members of a scientific community share, and conversely, a scientific community consists of members who share a paradigm". [1, p. 175] And he defined a community as "practitioners of a scientific specialty" [1, p. 176].

Anomalies occur when unexpected results are encountered or discovered which lie do not conform or are at odds with what would be expected under the prevailing paradigm. There is an inherent tension because on the one hand a paradigm should induce new theories, but on the other, established theories can prevent the discovery of new particulars.

If enough anomalies are discovered, a crisis may result. There is a realization the model which had proved so useful in the normal puzzle-solving sense was no longer adequate. A paradigm is usually quite resistant to change but when problems become numerous and, indeed, questions can no longer be answered, then a crisis ensues.

In the presence of enough anomalies, the group of practitioners which had been loyal to a given paradigm may then have to make a decision between remaining faithful to an old versus converting and accepting a new paradigm is essentially making a choice between two incompatible ways of community life.

The aim of this paper is to show that some of Kuhn's ideas on the way Science progresses can also be applied to three key Christian doctrines. This study is not comprehensive in nature, but by showing how Kuhnian concepts can be applied to this area of Theology, another step in the dialogue between Science and faith can be taken. The three doctrines to be discussed are: the doctrine of original sin, the doctrine of the Trinity and the doctrine of justification.

2. The doctrine of original sin

Tatha Wiley writes a thorough text examining the doctrine of original sin [2]. The author describes its origins, development and highlights significant key points that lead to progress in the exposition of this doctrine. The book also discusses more contemporary interpretations of original sin and their implications. Wiley's book covers a vast length of time: stretching from Judaism's views on sin to feminist theological interpretations thereof.

Wiley notes the doctrine of original sin grew incrementally during the first four centuries of the Church. The early patristic tradition was based upon the reflections of theologians and with bishops remarking the idea of original sin is a post-New Testament development.

The first person to give a detailed commentary on this doctrine was Augustine. Drawing upon the early Church Fathers, he drew two distinctions within the concept of original sin: *peccatum originans* (the event of original sin) and *peccatum originatum* (the condition of original sin). For the former, Augustine noted that Adam's first sin created a hostile disposition towards God that led to death [2, p. 58].

The work of Augustine can be considered as revolutionary and one where the doctrine was clearly defined, thus setting up a concrete paradigm [2, p. 111-134]. Wiley writes: "The theology of original sin developed incrementally in the patristic writings. The idea of original sin was a response to a broad range of questions – the relation of God to evil, human nature, the reason for divine redemption, the necessity for Christ, the practice of infant baptism, and the role of the Church in God's plan of salvation. Appeals to a first sin, to Adam's sin, to an original corruption, to an inclination to sin, or to a fall were ways of answering these questions." [2, p. 38]

Thus, the first writings on original sin were a response to questions and their incremental nature indicates what Kuhn would have labelled as normal science [1, p. 36]. They did not appear out of nowhere and were based on queries and inquisition which led theologians to look for answers. Their concerns, Wiley notes, were soteriological in nature [2, p. 54]. The notion of the doctrine of original sin as a paradigm takes on an even more significant meaning because views thereof influenced certain practices within the Church. It affected the nature and origin of the human soul (this is expounded upon shortly), baptism and whether human beings have free will or not.

As mentioned, it was Augustine who arguably first wrote extensively on the doctrine of original sin and although he was influenced by the patristic writings, his own inner struggles and personal experiences were also crucial in how he viewed original sin. Augustine was promiscuous as a young man and it was through grace that he was set free from the bondage of his carnal appetites. Augustine found sex and drunken orgies could not satisfy the soul and he became more and more anxious [3]. In agony, he heard a child's voice commanding him to read and when his eyes landed on Romans 13.13-14, he gave his life to Christ and finally found rest [3, p. 226]. Augustine's doctrine of

original sin did not go unchallenged and heated debates with Pelagius ensued; with such a struggle suggesting the presence of a pre-paradigmatic stage [1, p. xxv, 48]. Pelagius was born c.350 in Britain and well-read in the classics as well as being grounded in the Scriptures. However, Ferguson notes Pelagius was not a theologian, but rather a moralist. Their conflict primarily originated from their differing views on human moral nature. Whereas Pelagius maintained moral nature was God's gift and humans know the difference between doing good and evil, Augustine believed Adam's sin wounded nature and made humans biased towards doing evil. Human beings have free will, but only in bondage to sin [2, p. 69]. Ferguson lists numerous reasons why Pelagius and Celestius' (an assistant of Pelagius) teachings were refuted [4].

Pelagius overall conclusion is that one human theoretically live a perfectly moral and sinless life by observing all the commands of God. Indeed, in rejecting Augustine's views, Christopher Hall states "Pelagius desired to combat any tendency within the Christian community to excuse their sinful actions because of a defect in human nature itself" [5]

The disagreements between Augustine and Pelagius are put by Wiley in the following manner: "Pelagius, a British monk and theologian, is believed to have read Augustine's *Confessions* around 405. Augustine's later anti-Pelagian writings also appear to date their conflict to this date. But Augustine's silence about Pelagius until 415 C.E. suggests this later date as the beginning of their antagonistic relationship. Their friction continued until Pelagius' death in 420." [2, p. 61]

The length of this protracted conflict was probably unforeseen. It was at this stage that an anomaly had been discovered in the way sin is understood. That is, there was no paradigm to frame original sin. A crisis was ensuing because the need to capture what exactly original sin meant was missing. This conflict caused enough concern so that in the Council of Carthage in 418, when under the presidency of Aurelius who was the bishop of Carthage, action was taken against Celestius; the denouncement of the Pelagian doctrine of original sin and the approval of the views of Augustine. Previously, for at least two years, there was some turmoil within the Church as to what to do with Pelagius' views. The first council was convened in 416, also in Carthage. After Pelagius wrote *Book of Faith (Libellus fidei)*, he was reinstated in 417. But finally, as noted earlier, in 418 Pelagius' teachings were condemned by denouncing 9 of his canons [2, p. 281]. There were three on grace, three on general statements on sin, and three on original sin. For original sin, it was anathema to say death was not the result of Adam's sin, anathema to say a new-born child is not condemned to eternal punishment for what was acquired from Adam and finally anathema for those wishing to make a distinction between the Kingdom of God and Heaven (this centred on John 3.5 and on the necessity for infant baptism for new-born children to receive eternal life). However, internal conflict still remained, and another disciple of Pelagius, Julian, took over where Celestius left off. Pelagius' supporters were emboldened because not all the bishops had excommunicated Pelagius and Celestius after 418 [2, p. 281]. However, the

Council of Ephesus (431) confirmed the original repudiations of Pelagius, Celestius and Julian. Finally, the Council of Orange (529) reaffirmed and sided with Augustine's views. The establishment of such a council has a strong analogy with Kuhn's description of a group of practitioners in Science establish the terms of reference within a given paradigm. There is a consensus within this group which determines the direction by which new theories (but are really more like Kuhnian puzzles) are to be developed [1, p. 167-168].

Anselm and Aquinas further elaborated on Augustine's ideas, in what could be considered as analogous to normal science as described earlier. But Anselm wanted to also provide answers regarding the purpose of incarnation and redemption [2, p. 78]. In this regard, Kuhn's words "...the profession will have solved problems that its members could scarcely have imagined..." ring true [1, p. 25]. Anselm was influenced by medieval Theology with its ideas of honour and obedience. He read Genesis 3 within this context and unlike Augustine, Anselm believed Adam had insulted God and a repayment must be given to him for the dishonour. Thus, Anselm promoted the idea of justice in that only God and a human being, in the form of Jesus Christ could satisfy that debt. Anselm sought to synthesize the work of Augustine and his views were embraced by the Roman Catholic Church in 1523 where they were officially affirmed in the Council of Trent. Yet, this was seen as a move against the Reformers, and none more so than against Martin Luther. Medieval Theology did believe that although Christ's atoning work took away the eternal punishment of sin, "it was necessary for the sinner to provide some sort of penance to remove the temporal effects of sin" [6] Wiley notes (using Kuhnian terminology) "Luther's understanding of original sin broke from the dominant scholastic paradigm of his day" [2, p. 89] Luther attempted to define original sin more in line with what Augustine had in mind and in more personal terms than what Anselm and Thomas had proposed. The Council of Trent emphasized the need for ecclesial mediation of grace. Luther maintained that only God considers someone just [2, p. 89]. Luther was so against the notion of free will that this led him to write *The Bondage of the Will* (1525), strongly rejecting Aristotelianism and Scholasticism [6, p. 116].

Some division still remains within the Protestant and Catholic definitions, but perhaps not as great as before at least since the joint declaration signed between the Lutheran and Roman Catholic Churches. These two interpretations of original sin are not the only ones. For instance, whilst early Christians saw Adam's sin as history, it is now viewed as what is currently happening in human existence. More recently, different views taking into account personal and historical factors have been presented with Wiley remarking "contemporary theologians start with the view that religious practices, beliefs, doctrines, and texts are shaped by and reflect particular historical settings. In contrast to a static conception of religion, contemporary theologians think of religion dynamically, as a process of religious experience, conversion, questions, conflict, and development." [2, p. 128]

Two very recent interpretations on the nature of sin can be found in feminist theology and Reinhold Niebuhr thoughts. Feminist theologians describe that historically, other theologians have used the Fall as a means to subjugate women as causing Adam to sin. Turning the tables on what is considered to be a subordination of women by Man-centred theology with females being more prone to evil or sin, Willey quoting Ruether believes this is itself the sin. Alternatively, for Niebuhr, sin was closely linked to the fact Man tends to be selfish or ego-driven. Apart from the capacities for reason, moral choice and decision, Man's other source of goodness is having regard for others [2, p. 139]. Thus, the sources of evil are self-regarding tendencies such as egotism, self-regard, self-centredness and selfishness. All these alternative interpretations suggest that different communities may exist by which a particular theory may exist. Margaret Masterman [7] and George Ritzer [8] both discussed Kuhn's paradigms and suggested that in some cases there may be more than one paradigm in existence. These different communities seeing original sin through their own worldviews demonstrate this principle. Of course some theologians would disagree with some of these interpretations and would regard these views as perceived attacks against their own and perhaps perceived 'dominant' paradigm.

The doctrine of original sin displays many of the characteristics of a Kuhnian revolution: a pre-paradigmatic stage, the establishment of an actual paradigm (and its implications for other theories), some challenges to the paradigm because of a perceived anomaly, normal science in the form of continued development within that paradigm, a further challenge when it is believed the paradigm had strayed or a crisis has ensued, and then more normal science within an established paradigm of original sin.

3. The doctrine of the Trinity

The doctrine of the Trinity is also a doctrine that has seen since its existence conflict, heresy and debate. The focus of the doctrine is essentially about a relationship. LaCugna states "the doctrine of the Trinity originated as an explanation of how God's relationship to us in the economy of salvation reveals and is grounded in the eternal being of God" [9]. Economy of salvation is a term used to describe God's plan or management of his 'household' and defines this plan of salvation for those that believe. There are two key terms to be considered in the development of this doctrine – *oikonomia* and *theologia*. The former describes this economy and the latter is about the eternal nature of God. Disputes concerning the Trinity centre on how these terms are to be understood in relation to Christ, God the Father and the Holy Spirit.

The doctrine of the Trinity arose mainly as a reaction to Arius and his theology which maintained that "the biblical account of the economy of redemption reveals that Jesus Christ is a lesser God; the one who is sent is less than the one who sends" [9] Hence, in order to understand the Trinity, it is also

imperative to understand the catalyst that gave rise to a crisis which precipitated the need to formulate this doctrine in the first place.

Arius, a Libyan by birth, challenged Alexander's teaching that the Father and Son are both eternal. This is now considered heretical, but in the fourth century there was no clear position on the relationship between God and his Creation. Arius and his supporters cited numerous examples to back up their views that the Son was subordinate not only in economy (*oikonomia*), but also in *theologia* [9, p. 32]. The subordination of Christ to the Father was a misunderstood concept due to an anomaly that for around 400 years since God became flesh incarnated, there was no clear position on the relation of Jesus to the Father. Further, LaCugna notes there were several subtle variants of Arianism: "the fourth century comprised the search for an 'orthodox' doctrine of God. This is especially important to keep in mind when discussing the doctrine of the Trinity, since the temptation is to read authors in antiquity by the measure of a later doctrine." [9, p. 32]

Subsequently, Bishop Alexander obtained a condemnation against Arius' teaching at a synod of Alexandria (c. 317) and then sent letters to other bishops concerning the exclusion of Arius from fellowship. Arius, appealed to his friends, including Eusebius, the bishop of Nicomedia. The dispute went back and forth until a Synod was convened in Antioch in early 325. The Christology of Eusebius was condemned but Eustathius, a strong opponent of Arius, became bishop of Antioch. As another synod was getting ready to hear the recantation of Eusebius, Constantine saw this as an opportunity to have a celebration of his twentieth year of his acclamation as emperor and consequently invited around 250 bishops. Held in 325, this became known as the Council of Nicaea [4, p. 193]. According to Ferguson there are three aspects that should be highlighted from that Council [4, p. 196-197]. First, Nicaea was the first universal council; with such assemblies seen as the way to deal with dogmatic problems affecting the Church. A matter was determined a heresy or orthodox in these meetings through a vote. This has parallels with Kuhn's notion in Science that it is a scientific community which governs paradigm change. Kuhn noted "a paradigm governs, in the first instance, not a subject matter but rather a group of practitioners. Any study of paradigm-directed or paradigm-shattering research must begin by locating the responsible group or groups." [1, p. 179]

This means that although a paradigm can be first proposed by a single person, like Copernicus and the heliocentric system, which is Kuhn's prime example in illustrating his theory; its success must also include a critical mass of practitioners who embrace it and are willing to engage in puzzle-solving [1, p. 157-158]. The second important aspect of Nicaea is that it set up a paradigm in itself in allowing the involvement of the emperor Constantine. Lastly, Nicaea also made creeds something more than confessions of faith; they became formulations of councils. The bishops of the Council of Nicaea refuted Arius by teaching that "Jesus Christ was not created by begotten of the substance of the Father (*ousias*), *homoousios* (of the same substance) with the Father" [9, p. 36]

This should have seen the end of Arianism, but the Council, through the use of the word *homoousious*, appeared to create a bigger problem than the one it solved. The objections to the word were several [4, p. 200]. These are: 1) it was not used in the Scriptures; 2) it had been used by Gnostics; 3) it had been used by Paul of Samosata, a well-known heretic; and 4) it sounded Sabellian (this is the teaching by Sabellius circa 200, that stated that the Father, Son and Holy Spirit were three modes or manifestations of one God. Also known as modalism it views one God as manifesting in three modes of existence). [10] Although it seemed a paradigm had been determined, what happened had in fact resulted in the development of “many speculative and unarticulated theories that can themselves point the way to discovery” [1, p. 61]

This suggests that at the Council of Nicaea, the doctrine of the Trinity was still at the pre-paradigmatic stage and riddled with anomalies (not least because of loose terminology), and in the midst of a crisis due to conflicting views among theologians in the fourth century. Athanasius took it upon himself to continue to counteract related heresies to the trinity. Bryan Litfin writes: “the ancient Christians portrayed him as a solitary resistance fighter standing firm while the waters of heresy raged against him...Its probably not an exaggeration to say that if it were not for his efforts, a heretical view of the Trinity known as Arianism would have won the day...For several decades Athanasius was a lonely defender of the Orthodox view of the Trinity against the Arian view.” [3, p. 167]

The problem for Athanasius was great: in a time when money could buy power and against a tide of public opinion which was slowly favouring Arianism, his task was not trivial. Remarkably, what Athanasius was proposing was what Origen had suggested earlier [3, p. 175-176]. It was much like Copernicus' heliocentric model having been proposed earlier by Aristarchus of Samos. Before Ptolemy's geocentric view of the Universe, Aristarchus had suggested that the Earth rotated around the Sun and not the other way around. It was only centuries later that Copernicus revisited that model, going against the prevailing paradigm [1, p. 274-278]. Much like Copernicus, Athanasius paradigm was incommensurable with that of Arius and he encountered great difficulties in overturning the status quo. Just as Kuhn pointed out with Science, it was not that the data had changed, rather the standards and definitions of each paradigm were radically different [1, p. 147]. Olson notes there were three arguments which Athanasius used to support his views. The first is metaphysical: if the Father was God, then the Son must be God also, for otherwise the nature of the Father must have changed. The second argument was soteriological: if the Son of God is not truly God, then salvation as re-creation is impossible. Finally, the third argument is revelational: in order for Jesus Christ to be a true revelation of God and not merely another image or prophet, he had to be God. In short, “...if the Son of God who became Jesus Christ is not truly God as the Father is God, we humans are not being saved by him and our connection with him, and he does not truly reveal the Father to us. Furthermore,

the Father has undergone change in begetting a Son, which is improper to the divine nature.” [11]

Athanasius views of the Trinity could not be reconciled with that of Arius’ views whose implications would have tainted the divinity of Christ. Athanasius thoughts were rather revolutionary because on the one hand he was affirming the equality of the Son to the Father, but avoiding the Sabellian error of merely stating they were only various manifestations of the same God. Athanasius stressed the divinity of Christ without compromising Christ’s humanity. As mentioned, this was incommensurable with Arianism and Sabellianism, and in a Kuhnian sense, Athanasius had pointed out enough anomalies within the Arian position so that it finally fell out of favour. It is worthwhile noting that before Athanasius, there was a pre-paradigmatic stage evidenced by there being four types of positions regarding the relationship between the Father and the Son [4, p. 201-202]:

1. Homoousian – the Son is of the same substance with the Father,
2. Homoiousian – the Son is of similar substance to the Father,
3. Homoean – the Son is like the Father,
4. Anomoean – the Son is unlike the Father.

The Anomoeans were thought to be an extreme variant of Arianism, whilst a local Synod at Ancyra in 358 deemed the second and third positions to be essentially the same [4, p. 201]. Hence, even here, a distinct example of what Kuhn described as disciplinary matrices between the Homoousians and Homoiousians existed. This Synod, despite some minor differences believed that these two groups essentially shared the same paradigm (or look like sharing the same paradigm). Kuhn described this “the application of values is considerably affected by the features of individual personality and biography that differentiate the members of the group” [1, p. 185].

The work of Athanasius would then be advanced by the Cappadocian fathers. In what could again be considered as ‘normal science’, they were working with the paradigm established by Athanasius. They again stressed the Son was subordinate to the Father from the standpoint of economy, but not in theology. The debate then shifted from Athanasius versus Arius, to the Cappadocians versus Eunomius (an Anomoean bishop later deposed). Now what needed to be determined was the difference between ‘begotten’ with ‘being made’. The Cappadocians needed to explain that the Son being begotten does not mean He was made. Ironically, Hanson notes that in some ways, the use of *Logos* led to interpretations which slid into Arianism. Beginning with Origen and then continued by Eusebius, this term led to thinking of Christ as some kind of second-grade God who had to mediate between the Supreme Father and the world. The Cappadocian fathers sought to stress the inability to perfectly understand this relationship through the use of Greek philosophy [12]. Hanson remarks on this imprecision when he writes “...they were convinced that that full divinity of the three Persons must be defended while preserving the unity of the Godhead, and they knew no other language in which to defend it” [12]. Thus, the established of the doctrine of the Trinity means that just like in Science, new

‘puzzles’ are to be solved. These problems were eventually resolved within the existing paradigm thereby being analogous to ‘normal science’ [1, p. 36-42].

Finally, Gregory had the last word: if the Father was forever, then so was the Son; without the Son, the Father does not exist. Father is in relation to the Son. Moreover, since the Son is in the Father, the Son is always in essence what the Father is [9, p. 60-62]. Gregory had sealed the doomed fate of Arianism.

4. The doctrine of justification

This doctrine was central to the Protestant movement and the Reformation. Arguably, the doctrine of justification is to revolutions in doctrine, as Copernicus work is to progress of Science. Obviously, Martin Luther articulated the doctrine and brought it to the forth of Christianity, but Augustine also had quite a bit to say in this area. A thorough book which deals with this doctrine is McGrath’s *Iustitia Dei* [13]. After maintaining for a while the view that man had unrestricted freedom to free will, Augustine changed paradigms. Referring to Augustine’s *Ad Simplicianum*, McGrath writes: “while conceding that the human free will is capable of many things, Augustine now insists that it is compromised by sin and incapable of leading to justification unless it is first liberated by grace” [13, p. 40]

In discussing justification, the topic of free will and its state after the Fall is paramount. Augustine did not deny a dialectic existing between the concepts of human free will being incapacitated and yet man being responsible for sin and rebellion against God. Ultimately, the tension is between grace and free will (or agency) and Augustine realized that in developing this doctrine he had to affirm both. The remedy, Augustine declared, in allowing a sick and incapacitated man to enable to choose God is faith. This allows a will that did not initially want a remedy to now be cured and enable it to function properly. In addition, Augustine noted two functions of grace: the operative and the co-operative. The operative enables the restoration of the human will to full health and the co-operative function states that once this will is healed, man chooses upon the grace that God has bestowed, to do the works that he has set. McGrath describes this in the following manner: “the justification of humanity is therefore an act of divine mercy, in that they neither desire it... nor deserve it. On account of the Fall, the free will of humans is weakened and incapacitated, though not destroyed. Thus humans do not wish to be justified ... however once restored to its former capacities by healing grace, it recognized the goodness of what it has been given. God thus cures humanity’s illness, of which the chief symptom is the absence of any desire to be cured.” [13, p. 43]

In establishing a framework for justification, Augustine is also aware that any view he expresses in this matter will have a trickling effect on free will, grace and faith. As mentioned earlier, the position of God being the only and solely responsible being for justification permeates to other aspects or attributes within Christianity so that they share “a constellation of group commitments” [1, p. 181]. That is, just as Kuhn indicated that a scientific theory does not exist in

isolation from other related theories, a position or view on justification necessarily affects one's on other matters. One need not look further than to see that in the above statement by McGrath, justification cannot be expressed without the mention of grace, mercy and free will.

Merit is another term Augustine uses in connection to justification and good works as it is seen to be exclusively God's work rather than human. Good works are only possible after justification (not before) and even then any merit is a gift of God, not one adopted by Man [13, p. 44]. The result is that one cannot talk about justification without talking about the effects of original sin upon man and his subsequent ability or lack thereof to embrace Christ. Of course, Augustine was in a fierce debate with Arius and the notion of whether human being is able on his own to accept Christ. Another tenet of justification is the righteousness of God. This does not refer to the righteousness inherent in God Himself, but rather that by which sinners are justified. However, Augustine was more concerned with how God justifies rather than how he is able to justify.

If Augustine laid the platform for the doctrine, then according to McGrath, the Middle Ages saw a consolidation of it. In classic puzzle-solving mode, the medieval theologians sought to further refine it with one of the characteristics being to make a distinction between justification and sanctification. McGrath notes again: "... the characteristic medieval understanding of the nature of justification may then be summarized thus: justification refers not merely to the beginning of the Christian life, but also to its continuation and ultimate perfection, in which Christians are made righteous in the sight of God and of humanity through a fundamental change in their nature, and not merely in their status" [13, p. 59].

At this stage, justification had been tacitly accepted, but what this ultimately meant was being further progressed by other theologians. Kuhn, on this point, put it this way "one of the things a scientific community acquires with a paradigm is a criterion for choosing problems, while the paradigm is taken for granted, can be assumed to have solutions" [1, p. 37]. There is a refining and expanding of current theories but always within a well-established paradigm which assumes basic axioms and propositions as true.

For instance, sanctification during this period is typically understood as proceeding from a sinner after being justified and involves the process of inner renewal. But this is not where the understanding of justification ends and McGrath succinctly notes "this fundamental difference concerning the nature of justification remains one of the best (differences) between the doctrines of justification associated with the medieval and the Reformation periods" [13, p. 60]. It was during the Middle Ages that the rise of Christian scholasticism took hold. Franciscan and Dominican monasteries rose also emerged during this period. Perhaps most notably, it is during this time Thomas Aquinas stamped his mark in the Roman Catholic Church. Thomas wrote his *Summae Theologiae* for which it is well known for maintaining a distinction between faith and reason. He believed the former to presuppose the latter – something which Luther and Calvin never did [4, p. 498]. Discontent grew among some that the Christian

faith was not able to answer every possible question; ‘anomalies’ expressed by Duns Scotus and William Occam among others were beginning to show [14]. In their view, the paradigm which Thomas was proposing paradoxically raised some questions which it could not answer. These anomalies could not be fit within the existing paradigm [1, p. 66-70]. However, Protestants believed these anomalies could be answered with a reinterpretation, among other things, of the doctrine of justification. This entailed a revolution which split the Church and which created conflict and division. Again, Kuhn maintains this occasional occurs in Science where practitioners are asked to choose which community they wish to belong to [1, p. 157-158].

Looking back at history, the writings of Augustine and the consolidation of the doctrine of justification seem to almost lead to the Reformation, since it is this doctrine which provided the fulcrum of the dispute between the Protestants versus the Roman Catholic Church. Roman Catholics viewed the Reformation as innovations and new teachings and going against what they believed to be orthodoxy. A voice leading the chorus against Rome was Martin Luther, whose personal struggles at the time and the opposition he faced during this time has already been mentioned. There are several characteristics of the Reformation’s understanding on the nature of justification which McGrath lists [13, p. 212-213]. These are:

1. Justification is a declaration that believers are righteous, rather than a process for which they are made righteous. The change is in their status, not in their nature.
2. This leads on the obvious distinction between justification and sanctification or regeneration. A distinction is made where none was before.
3. The formal cause of justification is found in God rather than in something inherent in Man.

However, it would be a mistake to think Luther was the sole person to stand up to the Roman Catholic paradigm of the time. Whilst Luther laid the groundwork for establishing a distinct position from that predominant at the time, it was left to others like Melancthon to firmly establish the forensic nature of justification as outlined above [13, p. 213]. And just as Luther caused a revolution with his theses, further mini-revolutions or divisions occurred within Lutheranism itself. After Luther died, two warring groups emerged: the Gnesio-Lutherans and the Philippists (after Philipp Melancthon). The former declared to be the true Lutherans, while the latter were more conciliatory towards Rome in judging that some matters were rather peripheral [6, p. 147]. Relating this to Kuhn’s ideas, one could say that the Gnesio-Lutherans saw their position and views as completely incommensurable to Rome [1, p. 197-198], while the Philippists did not think some of their differences amounted to a “crisis” [1, p. 66-76].

The Reformation and the Protestant views on justification prompted a response by Rome. During 1546-1547, the Council of Trent devoted the sixth session to the issue of the doctrine of justification with its decree against it being the most significant achievement of the council [6, p. 211]. However, there were

some theologians who were sympathetic to Luther, but these were overwhelmed in numbers by the conservatives of the Roman Catholic Church. Thus, in the face of overwhelming opposition, new ideas which threaten an existing paradigm are extinguished. As Kuhn noted, in order for a new paradigm to emerge there must be a critical group of people willing to take up its course. This was not possible within the Roman Catholic Church.

The differences between the Roman Catholic Church supporters in the Council and the Protestants can be summed up in the following manner: the Council of Trent understood justification to include both legal justification and moral sanctification, while Protestants only restricted it to legal justification. Catholics believed the Protestants' definition undermined human responsibility; and Protestants, on the other hand, believed that it extols human effort thereby undermining God's grace [6, p. 213]. At that time, there was an impasse between the views of the Protestant movement and that of Rome. These differences were so great that they were irreconcilable and to use Kuhn's words "the inevitable result is what we must call, though the term is not quite right, a misunderstanding between the two competing schools" [1, p. 148].

The cataclysmic impact of Luther and the Reformation should not be undermined or underestimated, nor can the opposition or debate within the Church that it caused. It marked a watershed moment in Christianity for how a person can be saved and his (or her) and God's role in the process. Olson remarks: "the heart and essence of Luther's theological contribution, then, was salvation as a free gift of divine mercy for which the human person can do nothing. Many modern Protestants and even some Catholics take this idea for granted as if it has always been believed. But that is to ignore the revolutionary role played by Luther in recovering what had been largely lost and ignored for over one thousand years." [11]

5. Final remarks

This paper aimed to show that many of Thomas Kuhn's ideas can be applied to gain better insights into some key Christian doctrines. Entire books have been written on each of these doctrines alone and as such, this survey is not meant to offer a comprehensive thesis for each of the mentioned doctrines. It is hoped that this study further advances dialogue between models in the Philosophy of science and the development of Christian doctrine. It should be noted that correspondences between these two fields do have some have limits. In science, paradigms offer an interpretative toolbox of empirical facts, while in theology this might not be so obvious. Nevertheless, analogies in the way science develops with how Christian doctrines grow demonstrate that perhaps the bridge between Science and Christian theology might not be as great as perhaps perceived.

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