

THE EPISTEMOLOGICAL PARADIGM OF POST-RELIGIOUS HUMILITY

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After Copernicus (1473–1543) and the ongoing development of contemporary cosmization, a new epistemological paradigm of post-religious humility is replacing religious versions. In the 100th year of Kuhn/Lakatos, this article explores the differences between religious and post-religious paradigms of humility as a formative aspect of human knowing. Although post-religious humility does not necessarily strive to criticize earlier paradigms of humility, an implicit critique is often present. In accordance with Kuhnian/Lakatosian theory, this article is not about psychological traits or personality characteristics; rather, both types of humility as epistemological paradigms exist at the nascent stage of knowledge development. In retrospect, various thinkers throughout the Renaissance and Enlightenment demonstrate flux and conflict between the two paradigmatic humilities, and various theorists also struggle to articulate the emerging paradigm. The overall trajectory radicalizes the abandonment of anthropomorphism and positivistic assumptions about certainty. Historically, post-religious humility also intersected with society's perception of science's "progress" and a deeper embrace of finitude and mortality than was possible earlier. Movements like transhumanism, as well as phenomena of technological prowess and remarkable achievements in modern scientific research, do not contradict the new humility's role. Whether religious or post-religious, postpositivistic civilization increasingly experiences that the new paradigm repositions the sociological and cognitive place where humility can now comfortably reside.

Keywords: paradigm, cosmization, epistemology, postpositivism, humility, anthropomorphism

ЭПИСТЕМОЛОГИЧЕСКАЯ ПАРАДИГМА ПОСТРЕЛИГИОЗНОГО СМИРЕНИЯ

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После Коперника и в свете современной продолжающейся космозации на смену религиозным версиям приходит новая эпистемологическая парадигма пострелигиозного смирения. В этой статье в связи с недавним юбилеем Т. Куна и И. Лакатоса исследуются различия между религиозной и пострелигиозной парадигмами смирения как формообразующего аспекта человеческого знания. Хотя пострелигиозное смирение не обязательно связано с критикой более ранних парадигм смирения, в нем все же присутствует имплицитная критика. В соответствии с теорией Куна/Лакатоса эта статья – не о психологических чертах или характеристиках личности. В ней показано, что оба типа смирения как эпистемологические парадигмы существуют на начальной стадии развития знания. Оглядываясь назад, можно сказать, что различные мыслители эпохи Возрождения и Просвещения колебались между двумя



парадигмальными типами смирения, а многие теоретики также пытались выразить оформляющуюся парадигму. Общая траектория связана с радикальным отказом от антропоморфизма и позитивистских положений об определенности. Исторически пострелигиозное смирение также пересекалось с восприятием в обществе «прогресса» науки и более последовательным принятием конечности и смертности, чем это было возможно раньше. Такие движения, как трансгуманизм, а также явления технологического совершенствования и замечательных достижений в современных научных исследованиях не противоречат новой роли смирения. Будучи религиозной или пострелигиозной, постпозитивистская цивилизация все интенсивнее переживает переход смирения в когнитивное и социологическое измерение, где теперь оно может существовать с большим комфортом.

Ключевые слова: парадигма, космоизация, эпистемология, постпозитивизм, смирение, антропоморфизм

After Copernicus, humanity's sense of the cosmos gradually included the realization that it is bigger than previously envisioned, as well as older, non-teleological, uncentred, locally finite, inconstant in all its regions, and maybe just one of many other universes. These seven features, culminating in the currently provocative multiverse hypotheses, constitute what scholars call contemporary cosmization. Ancient attempts to envision the cosmos and humanity's place within it were often formulated within religious atmospheres. However, "Particularly in modern times there have been thoroughly secular attempts at cosmization, among which modern science is by far the most important. It is safe to say, however, that originally *all* cosmization had a sacred character" [Berger, 1967, p. 36].

This article argues that the emergence of a differently formatted humble spirit which does not necessarily involve a submissive posture towards deity or transcendence has become epistemologically paradigmatic for contemporary cosmization and postpositivistic science. The disputes between the more atheistic French *philosophes* and the still devout English scientists in the early 18th century are revealing. As Russell describes these French polemicists, "The vastness of the universe impressed them and inspired in them a new form of humility to replace that which atheism had made obsolete" [Russell, 1953, p. 77].

In the 100th year of Kuhn/Lakatos, the time is ripe to highlight the differences between religious and post-religious paradigms of humility as a formative aspect of human knowing. The change has become more visible during the present era of postpositivism. Postpositivism, as Burbules explains, is an orientation more than a unified school of thought, but all postpositivists are united "in believing that human knowledge is not based on unchallengeable, rock-solid foundations – it is conjectural" [Burbules, 2004, p. 25]. Dewey already spoke of "warranted assertibility" rather than "truth" [Ibid., p. 3]. Postpositivism's conjectural activity, from



the outset, humbly experiences itself as fragile in a different manner than the way in which religious yearning experiences its comparative vulnerabilities. “The post-positivist approach is... not so ontologically dogmatic” [Loughlin, 2012].

Religious Humility

The development of this new post-religious humility is intriguing, because from early eras it was commonplace to say that only the religious spirit explored the true dimensions of meekness as the foundation for epistemological explorations. For example, the ancient Psalm 8:4 asks “What is man, that thou art mindful of him? and the son of man, that thou visitest him?” As Brague points out, “The question, rhetorical, does not lead to a search for what constitutes man, but continues with a reflection on the place that God has accorded him... evoking the celestial bodies, in the light of which man is implicitly measured...” [Brague, 2018, p. 9]. For Islam, “submission” towards Allah (/’islām”; in Arabic: *الإِسْلَامُ*, latinized as al-’Islām) is considered a wise foundation for living in general, not to mention epistemology in particular. Likewise, “the earliest Zoroastrianism, so imperfectly reflected by the gāthās, seems to give first place to ‘wisdom’, to inner ‘illumination’ in the presence of the sacrificial fire” [Eliade, 1978, p. 316]. The paradigm in these old scriptures is that the pious person becomes wise by realizing their intrinsically low (yet esteemed by God) position within the cosmos, undertaking cognitive pursuits only from within that reverential matrix. This religiously engendered humility emanates from the relationship to the superior being or realm. The Iranian prophet Zarathustra was described as “humble, wanting to know the Lord’s will more concretely” and asking acquiescent questions such as “What dost thou command? What wouldst thou have as praise, as worship?” [Ibid., p. 302].

In religion’s paradigm, only arrogance dares to usurp the heavenly throne. “The fear of the Lord”, said the sages, “is the beginning of wisdom” (Prov. 1:7). Within this long-standing version of humility, only those without this intimate connection to transcendence repeatedly demonstrate egotism, haughtiness, and over-confidence, relying on their native intelligence and an overestimation of their technological abilities. “The fool says in his heart, there is no God” (Ps. 14:1). The Hebrew *לְרִמּוֹת* denotes someone thick-headed, obstinate, a philosophical bully, contrary to someone who is humble. The recommended epistemological stance was therefore intertwined with piety.



The Emerging Paradigm

While the human species is currently obtaining its seven-fold sense of contemporary cosmization, a different epistemological stance of post-religious humility gradually pervades the scene, ultimately nudging the earlier paradigm of unpretentious self-effacement into a defensive mode without necessarily demanding a confrontation. Pascal's religious awe about "the eternal silence of the infinite spaces" [1995, p. 48] steadily transmutes into Sagan's more scientific marvel about the cosmic context of "the pale blue dot" [1997] and his life-long references to the various "demotions" that the human race now experiences. "Miracles ceased, and wonder increased" – this is Stifter's poignant summary [Benjamin, 1978, p. 245]. The new paradigm sometimes worries that the former holy modesty harbors within itself a baleful version of vanity. Sayer explains that postpositivism not only rejects foundationalism and notions of absolute truth, but is also "quick to accuse opponents of assuming a 'god's-eye view' or an Archimedean point from which they can evaluate knowledge" [Moore, 2011, KL 1476]. Religion, while accentuating humility, arguably still assumes a "god's eye" perspective as a valid pursuit.

The question arises whether humanity is important enough to assume the dialogical necessity of a supreme partner. If shyness projects a cosmic and majestic alter-ego, then shyness may not be shy in the deepest sense. Instead, in the new paradigm, people intuit that however much they might matter to themselves and others, they do not necessarily matter to the universe nor to any egoistic notions of an eternal creator/redeemer. The ensuing paradigm of post-religious humility therefore has the potential to be more encompassing than the religious versions and takes on a different hue; it becomes more accepting of insignificance, not as a moral blemish or a punitive rebuke of pride, nor as an incentive to criticize theists, but simply as a perceptual and cognitive starting point in assessing one's surroundings, both interpersonal and cosmic. For Lakatos, this constitutes a change in the research programme; for Kuhn, it is a paradigm transition.

In hindsight, therefore, the ancient "What is man, that thou art mindful of him?" is beguiling. It situates the proposed humility within an intoxicatingly superior metanarrative. The sentiments within these older religious paradigms, which often do admirably curb human ostentation, simultaneously can support a global smugness with respect to humanity's interwoven relationship with the cosmos and earth's other species. Post-religious humility is potentially more organic, ostensibly more germane. Society might be dealing collectively, in other words, with a subtle but major paradigm shift, the overall impact of a relentless trajectory of deanthropomorphism within the history of science. "It is remarkable from how many sides and in how many forms one meets the thesis that is familiar also in the writings of Galileo himself – namely, the assertion that



it is absurd to suppose that the whole of this new colossal universe was created by God purely for the sake of men, purely to serve the purposes of the earth” [Butterfield, 1957, p. 69]. The stereotypical opposition of religious humility versus scientific arrogance loses cartoonish traction. Instead, in these two successive versions of humility, science frequently presents what Taylor calls “a mature facing of hard reality” [Taylor, 2007, p. 366], something this paper argues is launched by its own genre of humility.

Durkheim noticed early, though the paradigm-switch was already centuries in the making, that religiously-inspired reserve could deceptively harbor an overestimation of the investigator’s importance. In his view, religion struggles with this scourge of anthropomorphism whenever it glimpses the power of the incipient paradigm. Refuting the common assumption that religion originates from an admirable human apprehension of cosmic inconsequentiality, Durkheim says that science, instead, is what actually teaches people to be genuinely modest, and that “so far from being the result of man’s feeling of smallness in the face of the universe, religions inspire the opposite feeling...” [Durkheim, 2008, p. 75]. In other words, religions touting various admonitions to humility paradoxically inspire grandiosity. The paleoanthropologist Leakey viewed the entire epistemological pose centred within religion as so anthropomorphic that it was simply “great arrogance” [Leakey, 1992, p. 310]. Investigators who seem piously quiet, content to say they do not know very much – that only God, by noble contrast, knows everything – and who concede that life is full of insoluble mysteries but make such acclamations within the context of ascribing comprehensive knowledge to God, might be subconsciously cherishing the presumptuous and otiose hope recorded in the legend of Adam and Eve who “hoped to be like God” (Genesis 3:5).

At stake is what Kuhn often describes as a gradual collision between two paradigms. As Randall says, “The absolute insignificance of man before the mighty and relentless will of Calvin’s stern deity seems pomp and glory indeed compared with the place to which he has been relegated by modern astronomy” [Randall, 1976, p. 226]. From the post-religious perspective, in other words, the religious cognizance of humility eventually elevates humanity with undue warrant to a plateau of pomp and glory but simultaneously misunderstands the truly negligible state of the species’ inter-galactic contextualization. The deities might impose a heightened kind of constraint, but the newer postpositivistic option discloses vast limitations that have not been imposed so much as uncovered. “Man never understands”, said Goethe, “how anthropomorphic he is” [Goethe, 1998, no. 203].

Despite centuries of sanction, then, the self-effacing atmosphere of a sample text like Psalm 8 constitutes a potential subterfuge. The obverse implication becomes clearer in hindsight, when the new paradigm increasingly informs the texture of humility. “We have a deep-seated



longing”, says Rollins, “to confirm our desire for an ordered universe: a universe that makes sense, a universe in which we are special, valued, and eternal” [Rollins, 2011, p. 15]. Psalm 8 expresses such a world even though it concurrently demotes human beings from the realm of the gods and reduces them to an allegedly truthful and petite status. But the paradigm of post-religious humility in the wake of current cosmization is different, even if some nuances initially sound similar. Indeed, the new paradigm does begin with the similar non-confrontational assumption that humanity is not special, not valued, and not eternal – at least from the perspective of any outside validation – but then positions the acknowledgement of this collective inanity which was previously only a prelude to humanity’s trumpeted obeisance as now being a great albeit merely human achievement. As Thomas said: “The greatest of all the accomplishments of twentieth-century science has been the discovery of human ignorance” [Ferris, 1988, p. 383]. We know, says Ferris, where we are in the universe, and we also know when we arrived upon the scene, but “the more we know about the universe, the more we come to know how little we know” [Ibid.]. He refers to this new epistemic reality as “the modest claim of cosmological maturity”. Socrates’ dictum – I know that I know nothing – evinces a similar maturity, but without the benefit of contemporary cosmization as the sustaining fuel, and thus Socrates’ peripatetic wisdom could not yet unleash the paradigm “crisis” that finally becomes emblematic for 21st century consciousness.

Paradigms, Not Psychological Traits

This article is not about personal qualities. As Lakatos emphasizes, the “philosophy of science is primary, and... sociology and psychology are secondary in writing history of science” [Lakatos, 1978, p. 190]. Kuhn’s own excursions into historiography frequently show that religious as well as scientifically-minded individuals can equally demonstrate haughtiness and/or modesty. Similarly, religious institutions and scientific organizations can both engage in domineering colonialism as well as more gracious activities. In fact, contradictory personality traits can even co-exist, as when self-sacrificial individuals support dictators [Levinas, 2019, p. 144]. Rather than discussing idiosyncratic psychological quirks, the epistemological stance of humility in both religion and science is relevant to paradigms (Kuhn) or research programmes (Lakatos), the structural nature of the mental zone which precedes any concrete epistemological endeavours. Foucault refers to the primordial nature of this formative zone when he speaks of “the point of view of the epistemologist” [Rabinow, 1985, p. 12]. The point of view precedes the specificity of one’s epistemological ventures. When describing the history of secularization, Taylor



says “what began to look more plausible was the whole stance underlying the epistemology of materialism, over against that underlying the epistemology of Christian faith” [Taylor, 2007, p. 362]. This article’s interest is in that “whole stance”, Kuhn’s paradigm or Lakatos’ research programme, not the quaint diversity of mere affective inclinations. White refers to “a mode of consciousness adequate to the imperatives of ‘our’ modernity” [White, 2010, p. 321]. Paradigm alteration involves what Kant might have called *prolegomena* of epistemology, not the kindness/rudeness of practitioners. As Taylor explains, he is concerned with a framework for modern epistemology, something which exists at “the level of a structure in my sense, that is, an underlying picture which is only partly consciously entertained, but which controls the way people think, argue, infer, make sense of things” [Taylor, 2007, p. 557]. This formative structure references deep presuppositions about operational humility. The issue is not whether individuals are humble, but whether the *Ursprung* of intelligence itself has been cosmologically moulded in either this or the other fashion.

Continuities

As is typical of paradigm transitions, there are, in retrospect, numerous continuities between the two paradigms of presuppositional humility. Historians, for example, have demonstrated that science arose within the bosom of faith-based cultures. “Physics was born in a Catholic milieu, and the social anchoring of technology was probably English Puritanism” [Brague, 2018, p. 129]. Some Renaissance thinkers “reveal how a fearless adoption of new scientific facts can enhance rather than destroy Christian allegory and our understanding of the supernatural” [Millbank, 2005, KL 448]. In the 1600s, many felt that humility could serve as a foundational aura for both religiosity and scientific curiosity. As Klaaren says in *Religious Origins of Modern Science*, the new science “emerged in a milieu that in the deepest sense was theologically secure and lively by virtue of moving religious interests in creation and culture” [Klaaren, 1977, p. 187].

In his *Methodology*, Lakatos affirms that “Scientific knowledge in the seventeenth century was regarded by most of its representatives as an integral part of theological knowledge: most scientists, like Descartes, Kepler, Galileo, Newton and Leibniz, were after God’s blueprint of the Universe” [Lakatos, 1978, p. 195]. This orientation changes substantially by the time of Darwin, who “demonstrated a way of doing science that, *pace* Newton, aimed to do justice to the phenomena of nature without pretending to enter the mind of God” [Fuller, 2014, p. 30]. Various Protestant pastors in the 1600s actually promoted Copernicanism vigorously from their pulpits. The growing chasm between the two paradigms of humility



as history proceeds towards the 22nd century is therefore not rooted in trivia such as personal enmities from the past. People who approached new knowledge humbly could do so both because they honored religious dogmas and respected the intimidating new fields of worldly and cosmic exploration.

In today's academic climate, when cartoon images of an inevitable historical clash between paradigms have sometimes ossified, researchers can forget that religious thinkers were often as opposed to delusions and fantasies as those who engaged in science. A large amount of religious critique "was directed against astrology, divination, the worship of deified heroes, and belief in the divinity of the celestial bodies, which is to say, against 'superstition'. To speak of this as a conflict between science and religion... involves a fundamental misunderstanding of the complicated way in which the cosmos was understood in Western antiquity" [Harrison, 2015, pp. 53–54].

The post-religious version of humility is not any less connected to awe. Otto's *mysterium tremendum* was, indeed, voiced within a religious context [1917]. But a differently-nuanced numinosity also happens for secular investigators. Both groups of thinkers arguably share an "inability to hoist oneself on to an epistemologically safe platform..." [Berger, 1967, p. 188]. That lack of confident security is the global postpositivistic context which calls for the pervasive presence of humility in both camps. A mystic like Critchley appreciates atheism "because it renounces epistemological certainty and emphasizes human fraternity" [Kearney, 2016, p. 4], but the same mystical approach is often owned by scientists; they too renounce epistemological certainty and emphasize human fraternity. Einstein himself once said: "The cosmic religious experience is the strongest and the noblest driving force behind scientific research... My religious feeling is a humble amazement..." [Einstein, 2012, pp. 53, 98].

Discontinuities

Despite these continuities, discontinuity between the paradigms also increases. That historical dynamic, again, is something both Kuhn and Lakatos expect. Thinkers playing in the same arena divert to different stadiums as the centuries unfold. As Wallace notes, "Clearly Copernicus as a philosopher, with his innocently anthropocentric humanism, does not anticipate and could not survive modern 'self-assertion's' merciless critique of teleology" [Blumenberg, 1989, p. 20]. And the saga of papal power threatening to torture a blind and aged Galileo unless he recanted Copernicanism became understandably famous. Cartoons become entrenched, after all, when they actually strike a nerve.



One simple way to notice increasing discontinuity involves statistics. The British Association for the Advancement of Science was founded in 1831. From 1831–1865, “nine clergymen acted in the role of president; over the next thirty-five years, 1866–1900, no clergymen held that office”. The Royal Society was founded in 1660; scientists such as Newton, Darwin, Einstein and Rees have all been Presidents. Clerics were often prominent. But in the period of 1849 to 1899 The Royal Society witnessed “an overall decrease in the participation of Anglican clergymen from 9.7 percent to 3.1 percent” [Harrison, 2015, p. 162].

And yet, it remains difficult to detect with precision when religion and science, with their diverse yet similar investments in humility, began to drift apart more decisively. As Lakatos says, “Newton inherited his epistemology from a theology-dominated era... and even though he modified its dominant Aristotelian-Cartesian version, he still remained its prisoner” [Lakatos, 1978, p. 220]. Astonishingly, Newton comprehended the entire universe while still adhering to a 6,000 year old Creation. A scientist like Pascal – famous in mathematics – was also significant in the field of religion. “Pascal was no irrationalist, for he considered reason to be the highest gift to man... His critique was aimed at speculative reason, not at critical reason, and he felt that the final step in the process of reason was its acknowledgment that an infinity of things are beyond reason” [Hooykaas, 1972, p. 46]. For Pascal, in other words, though he embraced Copernicanism, the humility provided via religious discourse was ultimately more convicting than any modesty that might prevail in the scientific enterprise.

Kepler was arguably a pivotal figure, one of the last to integrate the two paradigms of humility. He attempted “to bare the ultimate secret of the universe in an all-embracing synthesis of geometry, music, astrology, astronomy, and epistemology. It was the first attempt of this kind since Plato, and it is the last to our day. After Kepler, fragmentation of experience sets in again, science is divorced from religion...” [Koestler, 1959, p. 394]. One can quarrel with the specifics of Koestler’s valorization. However, the sense that a transition was occurring in humility’s role within epistemology becomes ever more clear. The religious tone of Psalm 8, in which humanity is humbly viewed as part of a world governed by God, turns into a scientifically-tinged atmosphere drenched in unassuming awe. “Instead of the cosmos that gives man his measure, it is man who must create a dwelling to his measure... with the modern project, what encompasses man is in itself a chaos; there is no order except where it is created by human effort” [Brague, 2018, p. 4]. This re-evaluation of humanity’s locus is accompanied by the newer style of humility at the doorstep of epistemology.



Paradigms in Conflict

In retrospect, one also observes former disputants struggling to define the gradual emergence of the new paradigm within the last five centuries.

Consider the renowned “Objections” which Hobbes launched against Descartes’ *Meditations* in 1641. Sometimes it is difficult to discern why they were arguing, because they concurred on the crucial topics. They agreed, for example, “about the dangers of religion, the difficulties that confronted understanding, the priority of epistemology, the need for science...” [Gillespie, 2008, p. 263]. Yet they were notoriously polemical and feisty in their disputes. Hobbes argued that Descartes’ radical attempt to unthink everything prior to arriving at the bedrock of his *cogito ergo sum* was disingenuous because more than God’s mere existence was ultimately permitted in the eventual scheme. But Descartes was “astonished and scandalized” by the way Hobbes was counter-punching, and saw in Hobbes’ approach “the germ of impiety” [Mori, 2012, p. 211]. Descartes, in short, may have been resonating with a paradigm for humility that felt more alien to Hobbes.

Such a tussle from the past exposes the overall transition in hindsight. Schleiermacher, promoting “the feeling of absolute dependence”, is a startling example of the struggle to integrate these disparate historical conflicts into a new unity [Bruford, 1975, pp. 58–87]. In his 1799 *On Religion*, for example, Schleiermacher praises “this beautiful modesty, this friendly, attractive forbearance” which he says “springs from the nature of religion”, and testifies that “Seers of the Infinite have ever been quiet souls” [Schleiermacher, 1958, pp. 54, 55]. But simultaneously, the entire notion of humility is no longer dependent for Schleiermacher on a dogmatic version of a supreme being. Instead, “that glorious reverence, as exalting as it is humbling” is instead described as “the feeling of our relation to the whole”, which can just as easily fit within the emerging scientific paradigm while still nestled in the older paradigm [Ibid., p. 67]. When the orthodox theologian Karl Barth tried to decipher Schleiermacher’s final meaning, he cherished the hope that the ultimate source of the “feeling of absolute dependence” was still some classic version of God [Barth, 1982, p. 272]. But Barth’s friendly interpretation may be overly-friendly. Schleiermacher becomes more of a radical humanist than he might himself realize, for the cloak of religious terminology ultimately becomes unnecessary within his new system. The humble religious person becomes coterminous, in his writings, with the humble scientific person.

These examples from the past illuminate the ongoing paradigm skirmish, briskly adjusting presuppositional factors in epistemological ventures. “Our Graeco-Roman roots and our Christian heritage were so profound – so central to all our thinking – that it has required centuries



of pulls and pressures, and almost a conflict of civilisations in our very midst, to make it clear that the centre had long ago shifted” [Butterfield, 1957, p. 201]. This “shifting of the centre” is what paradigm change encapsulates. The humble predisposition had previously existed, but the centre slowly shifted from the religious terrain to the scientific. With this postpositivist change in the whole sense of what humbleness entails at the doorstep of knowledge, the history of cosmization experiences a gradual radicalization in the abandonment of anthropomorphism. Jonas hopes that the last traces of anthropomorphism may have been expunged [Jonas, 1974, p. 69], but Ricoeur warns that “an insidious anthropomorphism” remains a constant danger [Ricoeur, 1984, p. 185].

Collective resistance to absorbing post-religious humility still persists, partly because many experience the pressure initially, or under the duress of earlier punitive styles of religiosity, as being humiliating rather than humbling. The new epistemological stance of post-religious humility, at least in the earlier phases of post-Copernican breakthroughs, has not been easily attainable. Where does the persistent habit originate, for example, that still refers to Planet Earth instead of Planet Ocean [Weiner, 1986, p. 53]? Burttt contends that modern metaphysics “is in large part a series of unsuccessful protests against this new view of the relation of man to nature. Berkeley, Hume, Kant, Fichte, Hegel, James, Bergson – all are united in one earnest attempt, the attempt to reinstate man with his high spiritual claims in a place of importance in the cosmic scheme” [Burttt, 1924, p. 25]. For Burttt, in other words, all these philosophers were attempting to erect theoretical obstacles to block the encroaching paradigm. “One result of Copernicanism is the uninterrupted modern effort of resistance against its relentless execution” [Blumenberg, 1989, p. 77]. The slang term “mind-boggling” is inadvertently apt; the humility that is currently “boggling” or reshaping the human mind is imperiously marching forwards.

“Progress”

One key factor in the ongoing divergence between the two paradigms occurred via society’s perception of science’s “progress”. As discoveries and technological applications began to multiply, society began to sense an immense future for development. Scientific innovations felt like improvements, building on previous findings and insights. This dynamism contrasts with the humility that pervades the religious scene, where the faithful deal with an inherited body of valued material that is not organically open to fundamental change. The doctrines of Christianity, as one example, “cannot be indefinitely augmented in the way that the doctrines of science can, since there is a degree of finality and sufficiency



in the original deposit of revealed religious truths” [Harrison, 2015, p. 141]. To be sure, religions might reinterpret their sacred legacies and witness new breakthroughs in cultural adaptation; for example, some priests, rabbis and imams might favor the abolition of slavery, ennobling women, and becoming inclusive of LGBTQ2S+. But religions, in some critical ways, do not “progress” the way science seemed to advance. This general perception of progress therefore “lays the foundations for a range of common claims about the superiority of science to religion” [Ibid., p. 120], but these claims can disguise the fact that humility still exists at the outset in both venues. So, for example, “The diffidence of seventeenth-century naturalists was lost in the nineteenth century, when the original reasons for their epistemic modesty were forgotten and the idea of progress became firmly embedded into the West’s self-understanding” [Ibid., p. 189]. A generalized sense of progress has doubtless become part of the DNA of modern civilization, thus contributing to the divergence of the two paradigms.

Finitude

The growing awareness of cosmological finitude, including the limited temporal horizon for one meagre spiral in the Milky Way, is another important factor in generating the new paradigm – even more important than the notion of “progress”. Various figures during the 19th century began to envision, for example, the implications of the sun’s eventual demise. In 1852, Thomson published “On the age of the Sun’s heat”, showing that the first two laws of thermodynamics implied destructive results involving consequences for the universe as a whole [Brague, 2018, p. 146]. Those decades of debate were intensified by the discovery of Red Giants, identified by Father Angelo Sechi in 1868. He saw in them “the future of the Sun, condemned to collapse in on itself after a final explosion. The book in which this director of the Vatican Observatory popularized his discoveries was a great success” [Ibid., p. 147]. Lord Byron’s poem *Darkness* already included these lines in 1816: “The bright sun was extinguish’d / and the stars Did wander darkling in the eternal space / Rayless, and pathless, and the icy earth / Swung blind and blackening in the moonless air.”

These new themes, including an inevitable loss of long-term future for humanity, seriously impacted the humility quotient in the pursuit of curiosity. Darwin himself was disturbed by these grim prognoses near the end of his own life, calling the approaching oblivion “an intolerable thought...” [Danielson, 2001, p. 444]. Today scientists know the sun is actually increasing in brightness about 10% every billion years. The earth will actually be uninhabitable long before the sun becomes a Red Giant. The oceans will probably evaporate within 600 million years.



This emerging realization of “Death” writ large is noticeably different than the older religious paradigms which labored under the shadow of “Dust thou art and to dust thou shalt return” (Genesis 3:19), as if there was something reprehensible about that cosmic contextualization. The curse of dust functions as a punitive imperative within that paradigm, pronounced by the transcendent other, and is not merely a statement of fact. The newer acceptance of humble limitations simply acknowledges that human bodies were not intended to fly to Proxima Centauri and will not likely survive on alternative planets, in the same way that people currently have trouble breathing on Mt. Everest or at the watery depths which scuba divers wisely forego. Finitude and mortality are the cosmic context. The new humility is, in this sense, just a modern way of saying yes to this earth as the sum total of all there is. Practically, that radical embrace of finitude may be the only option available to humanity, the sensationalistic lure of a supposedly liveable Mars, Titan or Ion notwithstanding, not to mention exoplanets in some thriving solar system of yore, biospheres deciphered by the JWST. The most humanity might be able to achieve is geo-engineering a temporary reversal of climate change prior to the solar system’s gradual annihilation. That is not pessimism, only reality.

Transhumanism, Technological Prowess, and Postpositivistic Research

Some might regard transhumanism as an option which eludes the aforementioned scenarios, being neither a religious humility nor, on first impression, a modest proposal in a post-religious demeanour. Transhumanism is indeed a widespread movement replete with international conferences, journals, and books. In wishing to re-route the imperilled future, transhumanism includes strategies like uploading the contents of human minds; taking advantage of eugenics, bionic implants, and cognitive enhancements; considering space colonization and asteroid diversion; maximizing the potential of Artificial Intelligence; promoting postgenderism and morphological freedom; steering the species as a whole, not just some individuals, into a new life form which might become pure machinery withstanding even the meltdown of the Milky Way when it is struck by Andromeda, possibly by accessing wormholes to other sections of the multiverse. O’Connell defines transhumanism as “a movement predicated on the conviction that we can and should use technology to control the future evolution of our species... remaking ourselves, finally, in the image of our own higher ideals” [O’Connell, 2017, p. 2].

Does the ongoing maturation of a post-religious humility seem plausible in the light of transhumanism and its apparently audacious themes?



In actual fact, transhumanists squarely face the same cosmic blows that other scientists confront, but they react not with pride but alarm. Humbled by the daunting prospects facing the human race, transhumanists urgently seek to prolong the presence and relevance of the humanoid option, even if in diverse formats that re-engineer the process of evolution. The frantic search for new options does not preclude the presence of the humbling initiating event at the horizon of transhumanism's epistemological ventures.

Along the same vein, it deserves special emphasis that the advance of post-religious humility often coexists comfortably with vast increases in technological capacity. There is no inherent tension between spectacular human accomplishments (e.g. flying a helicopter on Mars) and the existence of humility as a core ingredient prior to genuine scientific thoughtfulness. Launching grand schemes, such as geo-engineering a reversal of climate change, intersects comfortably with an intuitive transition to post-religious humility. Global humility, in fact, may be the most necessary ingredient for eventual success: "Is the climate crisis a call to a new humility, one that is humanistic, ecological and sacred?" (Dr. Lee Newitt, conversation, 2021). The overall synchronicity of dazzling human intellectual marvels within an overarching aura of humility has, furthermore, been evident throughout the history of science, including the eras more dominated by religion. In the Renaissance, for example, invoking "the triad of the printing press, gunpowder, and the compass became almost ritualistic..." [Brague, 2018, p. 66]. In 6th century BCE *Job 28* the incredible feats of mining were affectionately juxtaposed to the integrating value of religion's humble wisdom. Zammito's *Postpositivism in the Study of Science from Quine to Latour* demonstrates that postpositivism co-exists comfortably with successful scientific experimentation, discovery, and inventiveness (2004). As Ecklund states, "Scientists can exercise humility in the current state of scientific knowledge while offering unabashed confidence in what is possible" [Ecklund, 2021, p. 110]. For example, when vaccines became urgent during Covid-19, it became obvious that the world needs "collaboration between biopharmaceutical innovators, governments, universities, and other research partners to speed up progress on the most pressing unmet medical needs" [Bourla, 2022, p. 176].

Summary

In the atmosphere fostered by the religious paradigm, humility was the quality that enabled people to concede there was likely a God and thereby go on to initiate an epistemologically humble approach towards gaining knowledge about the cosmos and life in general. Human arrogance was



then viewed as something that inevitably distorts the acquisition of knowledge. Aware of human smallness, the wisest members of the human race tended to accentuate their vast ignorance and the merits of relying on some conception of deity, or at least transcendence, to establish a foundation for appropriate epistemological ventures.

But lately, the history of epistemology and cosmization has turned a corner; the Copernican trajectory is now speculating there may even be an infinite number of universes. Multiverse theorization may well become a prototypical Kuhnian “crisis”, the type of development that can propel a paradigm transition into a more resolved state. According to multiverse speculations, the localized Big Bang of 13.7 billion years ago was perhaps not the only primordial explosion that has ever occurred, generating these eons of activity in one tiny corner of an everlasting array of new emerging universes. There may be billions of Big Bangs, generating trillions of universes which engender still more. All former versions of humility have simply become radically inadequate. The alternative is not humble religion versus arrogant science, nor arrogant religion versus humble science; rather, the paradigm transition references a colossal struggle between two overarching *zeitgeists* of humility that precede the structure of intellectual curiosity.

Conclusion

In light of developments in cosmization and postpositivistic science on the 100th birthday of Kuhn and Lakatos, it is advisable, epistemologically, to reposition the sociological and cognitive place where humility can more comfortably reside. The new paradigm has transformed the locale for the overarching modesty that precedes further intellectual exploration. The earth and this particular universe would exist without humanity’s observations, just as it contained no life during the first billion years of its gangly orbit and will someday be engulfed without regard to any humane feedback loop. This particular universe, at least – disregarding for the moment whether there are others – is not about us. To imagine a God who is in any way “for us” can become unexpectedly presumptuous rather than humble.

The new stance of post-religious humility therefore summons humanity to relinquish being anthropomorphic. People within religious paradigms have also been against egocentricity, but in some ways they could never ascertain how profoundly anthropomorphic their overarching visions often remained. The greatest clairvoyants in the history of religion were, in many cases, not trying to be conceited. And yet, now humanity can begin to grasp the extent of its earlier communal haughtiness. *Homo Sapiens* now intuits that it becomes a distraction away from humility



to import transcendental agents into the cosmos when none are intrinsically necessary.

There are paradigmatic reasons, therefore, to be humble today in a deeply post-religious manner, not in response to some hortatory encouragement, nor in an oppositional or defiant contrarianism towards earlier versions of religious humility, but simply because the new epistemological stance of post-religious humility is likely the more unpretentious way of interacting with the cosmic as well as the local environment, providing both sensible self-assessments and level-headed evaluations of others and the world.

The question as to which paradigm is “better” is ultimately inexplicable. As with most paradigm switches, the historical trajectory itself carries cumulative weight, even when the transitioning “crisis” lasts for centuries. Both Kuhn and Lakatos call for “long hindsight” [Lakatos, 1978, p. 86]. Paradigmatic transitions do eventually feel inevitable. Nietzsche already mused about “the last pope” [Nietzsche, 1961, pp. 271–275]. Rather than “What is man that thou art mindful of him?” the newer tune seems to intone “What is humanity, that the Universe is not mindful of them?” Awestruck worship of the creator differs from rapt veneration of the surrounding plenitudes now disconnected from originary thinking.

What Might Happen Next?

What could the future hold for these two jarring paradigms, both immediately and longer-term? These older and newer versions of humility continue to clash at deep sociological and emotional levels. The religious and post-religious forms of humility, both winsomely reticent, often have trouble coexisting as equally competitive gentle options, mutually respectable styles of attractive shyness. The post-religious version implicitly, sometimes with stridency, corrosively sabotages the older version as being a disguised form of superciliousness. Commitment to the new cosmization will likely become ever more dramatic as more astro-scientific discoveries and implications emerge. Religiosity and its attendant humility may still experience constantly diminishing spurts of apparent credibility throughout different regions of the globe. But the radicalization of the abandonment of anthropomorphism, including its impact on the nature of curiosity itself, is slowly becoming entrenched. A new paradigm almost always, routinely, supplants the earlier one in due course. A more resolved paradigm transition may require all seven aspects of contemporary cosmization, especially the provocative multiverse speculations, to finally exit the Kuhnian “crisis” and stabilize the current streams of post-religious humility.



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