

Analytic Perspectives on Method and Authority in Theology

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Is there Verification in Theology?

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Abstract: Critical realism (CR) has served as a benchmark in science-theology dialogue as a way of determining similar rational structures in these disciplines. One implication has been that Theology has a parallel form of verification to that of the natural sciences. However, defenders of CR in Theology have not clarified how this might be the case and so critics of CR have noted numerous alleged shortfalls in thinking of Theology objectively from a pragmatist perspective. This paper describes some of these criticisms, especially the more nuanced perspective of J. Wentzel van Huyssteen, whose concern for hermeneutics and epistemology is well suited to CR. Taking several cues from the theory of retrodution in the work of philosopher of science Ernan McMullin and the philosopher theologian Bernard Lonergan, this paper proposes a more explanatory form of CR that takes hermeneutical issues seriously while also retaining a cognitive focus on judgment. It is the capacity to judge, in the form of verified theories in science and theological doctrines, where a true parallel exists between theology and the natural sciences. The paper ends by noting a number of themes in Lonergan's magnum opus *Method in Theology*, where theological doctrines are capable of being explanatorily true whilst remaining subject to revision, analogous to the status of verified theories in the natural sciences.

Keywords: theological method; doctrine; Bernard Lonergan; Ernan McMullin; J. Wentzel van Huyssteen; verification; pragmatism; Nancey Murphy; retrodution; explanation; judgment

Over the past twenty-five years, theologians and philosophers have proposed diverging models of rationality to undergird theological method, mindful of the success of the natural sciences. Largely avoiding Gadamer's proposed distinction between *Bildung* (formation) and method, which was meant to restore epistemological rights to the humanities, these proposals have tended to depict parallels between scientific and theological criteria for attaining knowledge. Less visible than the debates over God, creation, evolution and human nature, the focus upon theology's methodological self-awareness in a scientific context has intensified nonetheless. Prior to this new embrace of a methodological rationality in theology, there were fewer claims of interdisciplinary parallels between science and theology. Tradition can be said to have served as a stand-in for such a theological rationality, although historically speaking, patristic neo-platonism, scholastic theology and early modern natural theology were genres of theological reflection that certainly evince a form of methodological self-awareness. And in more recent times, Thomas Torrance's interpretation of Karl Barth's use of *wissenschaft* in the *Church Dogmatics* served arguably similar purposes.¹

Epistemologically, critical realism (CR) has a key role to play in this story, since its authority is widely cited. Critical realism is the philosophical view that human knowledge is an achievement of correspondence to the actual structure of the world. The achievement of this knowledge nonetheless acknowledges the contingent, disciplinary and social factors in its attainment. Commendations for critical realism came in the early work of biblical scholar N.T. Wright and the lesser known biblicist, Ben Meyer.² Both have

¹ Torrance, *Karl Barth*, 179-80.

² See Wright, *The New Testament and the People of God*, 32-37 and Meyer, *Critical Realism and the New Testament*.

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been influenced by Bernard Lonergan but Meyer much more so than Wright. CR is most visible amongst theologians who are engaged in the dialogue with science. CR has been advocated by the leading lights in this field such as Ian Barbour³, John Polkinghorne⁴, Alister McGrath⁵ and Arthur Peacocke⁶ - each theologically trained, practicing scientists. However, CR's critics include philosophers Nancey Murphy and J. Wesley Robbins and theologians Niels Gregersen and J. Wentzel van Huyssteen. Each of them argue for a range of pragmatist, post-foundationalist epistemological points against CR. Van Huyssteen and Gregersen have formulated more constructive alternatives to CR, with the express aim of articulating a model of human rationality that in turn might frame a theological epistemology. Van Huyssteen's own position has evolved from an earlier sympathy with CR.⁷ Although their critiques vary, these challenges to the earlier CR consensus deserve more careful scrutiny.

I believe that CR requires a more fundamental grounding, because so far, the debate on the adequacy of CR in theological method remains blocked by misperceptions and philosophical technicalities. The main reason for these problems is that CR is conceptually underdeveloped by its advocates, who do not provide it with sufficient cognitive references. As a consequence, important issues that ought to be in the purview of epistemologically minded theologians such as whether doctrinal statements can be verified, do not receive adequate attention. The first aim of this paper is to point out some evidence for this diagnosis and to show that CR is more flexible, cognitively precise, and theologically relevant than *both* its advocates and critics allow. The softer criticisms of CR by van Huyssteen are a hint that CR is far from being an abandoned epistemological doctrine. However, in contrast to van Huyssteen, I believe CR still accounts for explanation in both science and theology. Explanation is a hallmark of critical realism's historic emphasis upon objective reference in science and the main reason why its relevance for theological claims is cited by the scientist-theologians. I agree with the assumption of the scientist-theologians that explanation is sought not only within scientific disciplines and the humanities, but also in theology. I argue that it is sought through nothing other than human judgment. An explanation's role is to state theoretically what is conceptualized in understanding. It does not presume to minimize the provisional character of that knowledge, and this is in fact what CR defenders such as Barbour and Polkinghorne have been at pains to portray.

A secondary aim of this paper is to extend the understanding and application of CR in a way that is coherent with the pragmatist, post-foundationalist thrust of Wentzel van Huyssteen's understanding of rationality. Given the role that van Huyssteen sees for judgment on the part of the human subject, I find it to be plausible that his understanding of judgment can be squared with critical realism in science and theology. Thus, the third aim of this paper adapts Ernan McMullin's depiction of scientific realism and Bernard Lonergan's theological methodology of 'functional specialties' in science and theology as tools to account for why CR works through judgment, in both of these disciplines. The development of CR in theological and scientific, explanatory contexts confirms its ongoing epistemological validity because both scientists and theologians use their judgment.

1 CR and its critics

Ian Barbour is one of the early advocates of CR and he established its credibility by linking science and religion as epistemologically parallel yet distinct forms of knowledge. His description stands as a classic statement of CR in terms more familiar to philosophers of science yet recognizable for theologians: "Against

³ See Barbour, *Issues in Science and Religion* and *Issues in Science and Religion*.

⁴ See Polkinghorne, *Reason and Reality*, *Science and Christian Belief*, *The Faith of a Physicist* and *Science and Theology*, among other volumes.

⁵ See McGrath, *A Scientific Theology*, and *The Foundations of Dialogue in Science and Religion*. In his scientific theology, McGrath constructs a deeper critical realism on the basis of the thought of Roy Bhaskar. My view is that Bhaskar's emphasis on socio-political questions and his relative lack of interest in religion leave his account of critical realism to be deficient as a truly interdisciplinary schema.

⁶ Peacocke's thoughts on CR are contained in his early work *Intimations of Reality*.

⁷ See evidence for such sympathy in van Huyssteen, *Duet or Duel*.

instrumentalism, which sees both scientific theories and religious beliefs as human constructs, useful for specific human purposes, I advocate a critical realism holding that both communities make cognitive claims about realities beyond the human world.”⁸ For Barbour, the main similarity between the disciplines is the parallel between scientific theories and data on the one hand and religious belief and experience on the other hand. Theories are analogous to beliefs and data are analogous to (religious) experience.⁹ Furthermore, according to Barbour, models and paradigms identify the tentative yet progressive way in which truth is claimed in both disciplines.

John Polkinghorne and Arthur Peacocke go a bit further by exploring a number of conceptual implications of CR.¹⁰ Polkinghorne, for example, describes his position as realist “because it claims the attainment of increasing verisimilitudinous knowledge of the nature of the physical world. It is critically realist because that knowledge is not strictly obtained by looking at what is going on, but it requires a subtle and creative interaction between interpretation and experiment.”¹¹ Polkinghorne is the most emphatic in terms of stressing the meaning of realism which is expressed in a “dual-aspect monism”, a worldview that marries the material with the mental.¹² This view would hint at panpsychism in Polkinghorne’s perspective because epistemology models ontology according to him.

Arthur Peacocke is more modest epistemologically. He believes that through metaphors, models and analogies, both theology and science aim to “depict reality.”¹³ He adds that “... The realism is always qualified as ‘critical’ since the language of science is ... fundamentally metaphorical and revisable, while nevertheless referring ... This position of critical realism as regards the status of scientific propositions inevitably involves some theory of reference.”¹⁴

There is a common thread in the adoption of CR among the scientist-theologians in their depiction of both science and theology, and it concerns method. While each thinker stresses certain aspects of CR, Thomas Kuhn’s notion of paradigms is cited by each of them. In the philosophy of science, Kuhn has often been interpreted by others in a non-realist way, probably at odds with Kuhn’s actual intent. What Barbour, Peacocke and Polkinghorne share, in their quest to equate theology and science epistemologically, is the conviction that human knowledge is similar across disciplinary boundaries. In my view, this parallelism is an unstable strategy, because CR only describes parallels without communicating how differences are more than differences in a ‘degree’ of objectivity.

Thus, in order to synthesize science and theology, each of these individuals rely upon other metaphysical commitments rather than CR to interpret realism. For instance, Barbour interprets his CR framework within a process metaphysic in addition to a sympathetic reading of Thomas Kuhn’s paradigm theory of science. Realism is threatened however due to the mutually exclusive nature of the metaphysics each of them embraces. Barbour adopts a process theism, Peacocke chooses a more theologically inclined concept of panentheism while Polkinghorne adopts a dual-aspect monism in combination with theological credal orthodoxy. If CR yields at least three forms of metaphysical content for theology, what good is it? If an epistemology is adopted that describes theology and its object, one might expect that the resulting concepts of God and the God-world relation to be similar for these thinkers but they are not. Theological critics of CR, such as Andrew Moore, assert that this is precisely the kind of heterogeneity that one should expect in the science-theology dialogue when the natural sciences and its methodological empiricism dominates the anticipated results of theological reflection.

⁸ Barbour, *Religion in an Age of Science*, 89.

⁹ Barbour, *Religion and Science*, 106-112.

¹⁰ See Allen, *Ernan McMullin and Critical Realism* for an elaboration of the various ways that Polkinghorne, Peacocke and Barbour each articulate critical realism and my evaluation of these differences. See also Polkinghorne, *Scientists as Theologians*.

¹¹ Polkinghorne, *Science and Theology: An Introduction*, 17.

¹² Polkinghorne, *Science and Christian Belief*, 21.

¹³ See Peacocke, *Theology for a Scientific Age*, 21 and *God and Science*, 5.

¹⁴ See Peacocke, *Theology for a Scientific Age*, 13.

CR has faced more stringent criticism from philosophers than theologians however. The central issue at stake is the meaning of the ‘real’.¹⁵ One of the most significant philosopher-critics of CR is Nancey Murphy, who believes that CR is unwarranted because it attempts to grant the human mind access to reality apart from cognition.¹⁶ Murphy thinks that CR is either tautologous (and therefore irrelevant) for bridging theology and science, since it does not add anything to the concept claimed in a specific proposition. Borrowing from philosopher of science Imre Lakatos’ concept of research programs, Murphy argues that progress in knowledge can only be measured inasmuch as theoretical explanations constitute coherent blends of hard core doctrines and auxiliary hypotheses. She views theology and science as methodologically similar, inasmuch as they each pursue successful research programmes. This is a holist, non-foundationalist view, which she claims is consonant with postmodernism’s attention to linguistic usage and an avoidance of representational language. Instead of the certitude she perceives in arguments for realism, she claims that knowledge consists in interlocking webs of verified beliefs. In theology, one can construe, on Murphy’s Lakatosian terms, Catholic and Anabaptist theological research programmes with their respective core doctrines and auxiliary hypotheses.

For Murphy, the disjunction between modern foundationalist epistemologies and postmodern contextual epistemologies represents a fundamental epistemological choice. One of Murphy’s collaborators, Robert J. Russell, describes her epistemology in terms of ‘emergent epistemology’ a conceptual cousin of CR.¹⁷ While acknowledging her official dissent from CR, he pleads for the criterion of progress as a fundamental criterion for measuring the knowledge gained by the scientist and the theologian. The implication is that CR and Lakatosian research programmes are potentially overlapping. This is a substantial nuance.

Murphy sees theology in line with George Lindbeck’s theory of doctrines, “as first-order discourses of the church” and the work of theologians as oriented to the “need [for] an organizing idea.” Her focus on mediating traditions is another way to offer a counterposition to CR, and this is reflected in her endorsement of the tradition-centric thought of Alasdair MacIntyre. Against the ambitious scope of CR, she concludes that no single theory of scientific language should be expected to fit every imaginable empirical data.¹⁸ Context is crucial, whether in science or theology.

Philosopher J. Wesley Robbins criticizes CR in similar terms, maintaining that pragmatic ‘vocabularies’ do better justice than CR in justifying knowledge claims. This is due to what he sees as CR’s naïve claim of correspondence between cognitive values and the physical world. Instead of seeing CR’s chief weakness as the over-determination of reality (Murphy’s claim), Robbins censures critical realists for leaving the cognitive value of both disciplines as “strictly indeterminable.”¹⁹ According to Robbins, this difficulty is compounded by CR’s “presupposed psychology”, a view of human cognition that is Cartesian and bent on inner representations of the external world. Robbins borrows from William James in order to argue that scientific and religious ideas are better conceived of as useful tools. For James, ideas are irreducibly linguistic. Language, according to Robbins, determines the way in which we interact with nature: “the cognitive value of religious doctrines lies in the extent to which holding them to be true enhances our ability, for example, to deal with a variety of extreme circumstances.”²⁰ Consistent with recent treatments of religion from an evolutionary perspective, Robbins suggests that human cognition comprises an interested stance toward nature.

In agreement with Robbins is Willem Drees, another CR critic who also sees religion as a ‘way of life’ and therefore not subject to epistemological evaluation; religion does not find out how we know the way things are.²¹ In short, with Robbins and other participants in the science-theology dialogue, pragmatism has secured a beachhead against CR by staking out arguments premised on religion’s functional utility.

¹⁵ One of the few exceptions is Moore, *Realism and Christian Faith*, which critiques realism on the grounds of Barthian theology and linguistic theory.

¹⁶ See Murphy, *Theology in an Age of Scientific Reasoning*, 198.

¹⁷ Russell, “Eschatology and Physical Cosmology”, 277.

¹⁸ Murphy, *Anglo-American Postmodernity*.

¹⁹ Robbins, “Pragmatism”, 666.

²⁰ *Ibid.*, 655.

²¹ Drees, *Religion, Science and Naturalism*.

These claims, however, do little justice to the seriousness of the metaphysical dimensions of the questions addressed by theology.

A third, more substantial critique of CR comes from Danish theologian Niels Gregersen. He critiques CR not only from the perspective of coherentism, but more recently, on a diagnosis of a typology of realisms.²² According to Gregersen, metaphysical, semantic and theoretical-explanatory realisms are distinct. CR is really an incautious combination of these different realisms. This complexity leaves Gregersen to propose that a choice ought to be made. He follows philosopher Stathis Psillos, who divides the realist camp into three forms: semantic realism (SR), metaphysical realism (MR) and theoretical-explanatory realism (TER). Insofar as theology is concerned, while semantic and metaphysical realisms are valid, Gregersen is convinced that theoretical-explanatory realism fails. He rejects a theological version of CR, because this kind of CR depends on theoretical explanation, as if providing an evidential account of God. As Gregersen sees it, TER can only be justified in certain scientific disciplines on a “case-by-case basis.”²³

In Gregersen’s judgment, theology cannot falsify or verify its discoveries in the same way science can. He cites philosopher of science Ernan McMullin, who also doubts whether CR can be applied to theology in the same way as it does in science. As McMullin says, “it would be unwise ... to suggest that what enables the realism of science to be self-critical and progressive may somehow be transferred to the domain of religious belief.”²⁴ In science, McMullin endorses scientific realism, which stipulates that there are properly empirical criteria available for judging how and why explanations concerning a physical phenomenon can be true. In theology however, as Gregersen sees it, if explanation is the goal of theological understanding, “it might well be that the sophistication of dogma eclipses the reality of Jesus, both as a historical figure and as part of divine nature.”²⁵ This is a critical judgment on the limits of explanation in theology.

We are compelled to conclude from Gregersen’s argument that a theoretical, explanatory realm of meaning is marginally able to depict God or related objects of theological inquiry. For Gregersen, explanation is epistemologically inappropriate, since theory is meant to hypothesize a claim with respect to a reality that is in principle verifiable. But, God is unavailable for verification. God is experienced and inferred but neither verified nor consequently affirmed as an explanation for a particular reality. As we shall see, Gregersen’s position has crucial consequences when it comes to other church doctrines, including the christological doctrines.

Summing up the criticisms of CR that I have described so far, we can say that for Murphy, CR is a tautologous, ‘modern’ epistemology that distracts the philosopher from the rules, norms and presuppositions that guide successful or failed research programmes, while for Robbins and other pragmatists, CR is simply a false portrait of cognition. For the theologian Gregersen, CR fails inasmuch as it pretends to offer an explanation for theoretical entities, for which theology lacks the scientific equivalent of verification. Despite the drawbacks that I have mentioned in each case, these three critiques taken together constitute a case for diagnosing a lack of cognitive justification in CR, a lack of careful detail about how theology claims the depth or scope of doctrine as a form of judgment in particular. For these critics, CR is a weak epistemology because it appears to rely on arbitrary settlements in the tension between epistemological subjectivity and objectivity. CR appears to perpetuate, without resolving, the tension that is basic to modern epistemology since Descartes. Inasmuch as these critiques successfully identify a lack of analysis of explanation and judgment in CR, especially theological CR, a strict methodological parallelism between science and theology seems impossible.

These criticisms of CR and the problems with these criticisms reduce to a single problem, which is that the pragmatic features of theological reflection overrule the explanatory intent of theology and theological judgments. However, as I will show, not only are explanatory judgments cognitively similar across disciplines, explanations do not imply ontological certainty. Moreover, the theological effort to explain God’s being and God’s action in the world through acts of considered judgment has historically

²² See Gregersen, “A Contextual Coherence Theory” and “Critical Realism”.

²³ Gregersen, “Critical Realism,” 80.

²⁴ Ernan McMullin, “Realism in Theology and Science, 43 and 47.

²⁵ Gregersen, “Critical Realism,” 91.

characterized what it means to do theology and pretending otherwise is disingenuous.

For CR to successfully account for theological truth claims, it is necessary for CR to be open to pragmatic concerns, yet indirectly, the quest for truth in the context of scientific claims about physical reality and apprehensions of divine mystery and being cannot be set aside. Before reconstructing CR in theology, it is first important to establish how explanation and underdetermination work analogously in science.

2 CR and scientific explanation

The scientific history of the twentieth century has not been kind to realists or to realist interpretations of scientific explanation. Until the 1960's, realism was a minority view given the predominance of positivism. Carl Hempel, one of positivism's most important representatives, once described the confrontation of a hypothesis with empirical observation reports as of: "a purely logical character; the standards of evaluation here invoked - namely the criteria of confirmation, disconfirmation and neutrality - can be completely formulated in terms of concepts belonging to pure logic."²⁶ According to logical positivists, realism is a misdirected doctrine for its' tendency to formulate a theory of science in terms other than the strictly logical. At a popular level, positivist interpretations of science have proven resilient, such as in the persistent use of the term "proof" in contexts where incertitude reigns. CR only emerged as a widespread view during the debates among mid-twentieth century philosophers who foresaw the problems of associating logic and certitude. However, CR's privileged status was brief, once instrumentalists objected that CR could not account for determinate ontological properties in the very large cosmic and the very small quantum worlds.

Quantum theory has been the most prominent in undermining realism due to its picture of wave-particle dualism. Also relevant were Heisenberg's 'Copenhagen interpretation' of quantum system experiments (making a measurement affects what is measured) and later, the experiments that showed non-local effects of sub-atomic particles on one another, in contradiction of Einstein's rule that no causal forces can act faster than the speed of light. These new quantum realities introduced profound epistemological and ontological instability, which in turn threatened CR. In recognizing the far-reaching effects of quantum theory, Einstein drifted towards a realist perspective and away from positivism. He openly sympathized with the view that hidden variables, not uncertainty principles, would eventually account for the strangeness of quantum-level particle/wave behaviour. For Einstein, this was a strategy for maintaining the independence of the scientist as an observer separable in principle from the external physical world.

Philosopher Christopher Norris, countering the anti-realism of the Copenhagen interpretation of quantum theory, has turned the tables by claiming that defenders of the Copenhagen principle engage in circular reasoning by both presupposing and concluding anti-realism.²⁷ For Norris, the alternative is to side with David Bohm, Einstein and the minority who still foresee quantum theory in terms of a larger causal-explanatory framework, though not with Bohm's 'hidden variables' hypothesis per se.

Despite considerable opposition arising from quantum mechanics, CR is far more resilient in explaining the success of the structural disciplines, such as geology, evolutionary biology, and cosmology. This has given rise to a form of scientific realism which is also known as 'structural realism'.²⁸ In such disciplines, theoretical constructs invite experimentation, verifications and the promise of scientific progress in the process of identifying entities by virtue of their core properties. Philip Kitcher goes so far as to suggest that realists are within their rights to defend a correspondence theory of truth between things and mental constructs, a Cartesianism that was once thought unimaginable amongst philosophers.²⁹

Yet, extensive criticism of CR continues to arise within the humanities by critics sympathetic to Thomas Kuhn's paradigm theory of scientific progress, despite the fact that defenders of CR also advocate Kuhn's theory. According to both sides, doctrinal development has occurred in Christian history as a series of

²⁶ Hempel, "Aspects of Scientific Explanation," 22.

²⁷ See Norris, *Quantum Theory*.

²⁸ See Chakravartty, "Structuralism" and Psillos, "Is Structural Realism Possible."

²⁹ Kitcher, "On the Explanatory Role."

leaps from one paradigm to another.³⁰ But, the problem with Kuhn is his introduction of tension between epistemology and rationality. Ernan McMullin comments: “The Kuhnian heritage is ... a curiously divided one. Kuhn wanted to maintain the rational character of theory choice in science while denying the epistemic character of the theory chosen. The consequent tensions are ... familiar to every reader of current philosophy of science.”³¹ For Kuhn, the theoretical framework for scientific explanation is unstable in the long term, a point of epistemological principle. Thus, the referential or ontological significance that realists want to accord something, explained through discovery and verification, is ruled out by Kuhnian epistemology.

The question of verification thus becomes key. This is a topic on which McMullin has contributed key insights. Do social factors, such as political bias and ideology really determine the epistemic status of the conclusions to particular questions? Or do such factors merely influence the kind of question originally asked? The answer has direct relevance for theological doctrine, to which we shall turn shortly. McMullin makes the key distinction between epistemic and non-epistemic values guiding theory choice. If a theory makes headway due to its empirical adequacy, its fertility, coherence, consistency or unifying power, it is a successful theory in explaining a natural phenomenon. Drawing on a combination of such cognitive values, a theory may render a more adequate explanation of an entity or process than its competitors. These particular cognitive values are key to how McMullin accounts for realism in science, meaning that “the long-term success of a scientific theory gives reason to believe that something like the entities and structure postulated by the theory actually exists.”³² But, a theory is successful indirectly speaking, because non-epistemic factors like social location and worldview contribute conceptual contexts in which insights, theories, and verifications can emerge whole. Yet, non-epistemic values are not *directly* relevant to a theory’s truth value. Non-epistemic values are in the background, not the foreground, when establishing the truth of a theory.

By establishing a clear difference between epistemic and non-epistemic factors in scientific verification, the scientist exercises critical judgment through self-awareness, which is key to the progressive nature of research programmes. Research programmes are those designated loci for understanding scientific progress, the sets of interlocking ideas which Nancey Murphy and others refer for their descriptive epistemology. However, by focusing on the research programme instead of the human judgment exercised in verifying theories, Murphy bifurcates the object(s) of inquiry and the scientist’s or theologian’s process of inquiring. Ideas matter most, judgments least. A twin lack of cognitional focus and references to objects is what characterizes Murphy’s and Robbins’ theories of science. Gregersen’s epistemology is more amenable to CR. Nevertheless, in all of these criticisms of CR, including his, theory and explanation are conflated whilst verification and judgment are elided. In these critiques, the discoveries that lead to explanations and their verification are collapsed through a theory which only highlights the context and web of ideas of groups of scientists or theologians. But, without an affirmation of reference and the judgment exercised through verification, we are bereft of a meaningful interdisciplinary epistemology.

In contrast, I hold that CR is an epistemological doctrine about successful theories, not research programmes. As such, it may apply to theology with qualifications in regards to theology’s dependence on analogical speech. Success is a general criterion for true theories and is a way of speaking about imaginative judgment through the application of various epistemic values in theory evaluation. Hilary Putnam’s pithy statement that “The positive argument for realism is that it is the only philosophy that doesn’t make the success of science a miracle” is one way of alluding to the centrality of success to CR.³³

But it is Ernan McMullin who clarifies the relationship between scientific success and truth, first by way of the distinction that I have already discussed between epistemic and non-epistemic values in theory verification, and second, through an assessment of the truth value of individual judgments in verification.

³⁰ See Küng, *Does God Exist?*, 111.

³¹ McMullin, “Rationality and paradigm change,” 75-76.

³² McMullin, “A Case for Scientific Realism,” 26.

³³ Putnam, *Mathematics, Matter and Method*, 73. Philosopher Mario Bunge asks rhetorically “what does success mean in science other than ‘truth’? The Nobel Prize is awarded...to scientists who have found some important truths about a part or feature of reality.” See Bunge, *Chasing Reality*, 262.

The role of truth in scientific explanation leads McMullin to articulate a general form of inference at work in science, termed ‘retroduction’, which I will not detail here except to say that it is a general form of inference that explains an entity’s cause from its observed effects.³⁴ Retroductive explanations explain the underlying processes, structures and entities that yield inductively explained regularities. Deduction and induction are inference types that are a part of the wider portrait of scientific rationality in retroduction. Human judgment is key to the theory of retroduction, and thus allows for an understanding of how science and theology are parallel forms of knowledge. But by speaking of parallels, I mean something different from those described by Barbour and other CR advocates. We avoid rendering theological procedures as somehow reducible to a form of scientific method by speaking cognitively not epistemologically. It suggests that theological procedures are realist, because theological judgments and verifications are akin to scientific judgments and verifications, cognitional operations which are realist given the criterion of success.

In summary, if CR were articulated in terms of successfully judged theories, it would be far more difficult for the critics of CR to allege that realism is a redundant, epistemological imposition. By defending CR in terms of retroduction, we see cognitive methodological unity between theology and science, not simply descriptive parallels of model / metaphors usage. In addition critics of CR need to consider why creedal formulations about God as explanatory assertions are thought to refer. The next section will clarify some aspects of this theological epistemology.

3 CR and van Huyssteen’s rationality

In this section of the paper, I want to draw certain conclusions about why CR, thanks in part to retroduction, can better frame the rationality proper to theology – in addition to that of science. A theological CR must recognize this essential difference, which Karl Barth expressed as the strictly dialectical character of theological discourse: “the object of theology itself is not something that can be pinned down or brought under our ‘scientific’ control – it is a living, moving object, or rather a living *subject* who actively encounters those who study him.”³⁵ Yet, the question is whether or not Barth’s qualification renders it impossible to portray theology as methodologically parallel to the sciences. Recall the way that the theory of retroduction distinguishes between epistemic, internal values to the scientific process of verification and those ‘non-epistemic’ values that provide the historical occasion for making particular scientific inquiries. Given the Barthian critique of a theological method conceived on the analogy with science, we can say that Revelation is nothing other than the occasion for theological inquiry, not a point on which the analogy with science breaks down.

The Barthian insistence on God’s word does not prevent methodological discourse, but rather provides the impetus for it. Michael Polanyi famously made the case for science as a fiduciary practice where the epistemological structure of science compares favourably with theology’s trust in the meaning of God’s revelation. If the cognitional processes that help to understand God were fundamentally different from those used to explain natural processes, it would be necessary to spell out the distinctly different rationalities in which respective theological and scientific judgments operate. But, the rationality by which theology develops is not different, cognitively speaking. Theology is much more than a form of *phronesis*.

I want to claim that CR justifies theology as an explanatory discipline on the basis of a confidence we place in human judgment. Construed as such, theological CR is not a kind of foundationalism of ideas or metaphysical concepts, contrary to what its philosophical or postliberal theological critics suggest because, as retroduction and explanatory judgment in science show, CR is not form of foundationalism in science. To illustrate the enduring value of CR in theology, I turn now to select insights provided by J. Wentzel van Huyssteen and Bernard Lonergan, who in their unique ways utilize the cognitional dimensions of the philosophy of science to elucidate realism. Although van Huyssteen has expressed some pointed doubts over the efficacy of CR in theology by adopting what he refers to as a postfoundationalist perspective, he

³⁴ See McMullin, *The Inference That Makes Science*.

³⁵ See McKenzie and Myers, “Dialectical Critical Realism,” 53.

states: “if theology and the sciences share the rich resources of human rationality, then it is to be expected that there will be important *parallels between the role of explanation* in the sciences and in theology.”³⁶ Science-theology dialogue participants often display impatience toward theological hermeneutics, but in contrast, van Huyssteen wants to retain explanations as valid statements about reality so long as they consist of being understood as interpretations of data framed by particular disciplinary languages. He has put this into practice by tackling the question of human evolution in a dialogue with the field of paleoanthropology.³⁷ On a postfoundationalist stance, both theology and science recognize a central place for cognitive values in making choices and judgments.

As I say, this does not lead van Huyssteen to embrace CR despite his earlier sympathies with CR. At one point, he embraces a “weak form of critical realism.” He highlights a number of epistemological features among various disciplines such as the collaboration amongst members of an inquiring community and fallibilism. He prefers to think of CR as the “estimation of truth” rather than the “approximation of truth” that is customary in Polkinghorne’s writing and that of other CR standard-bearers.³⁸ Borrowing heavily from the thought of pragmatist philosopher Nicholas Rescher, van Huyssteen describes realism not so much as a theoretical accomplishment based on evidence or success but rather as a constraint, arising from humility, the provisionality of knowledge and the “pull of purpose.”³⁹ He embraces how human judgment shapes ongoing inquiry in a fallibilist spirit. The indispensability of human judgment ensures that the personal voice of the scientist or the theologian and the frequency of disagreement are not lost in accounts of methodology.

Where van Huyssteen’s qualifications of realism become strained are with regard to objectivity. Relying on Rescher, van Huyssteen values objectivity as a presupposition which functions to provide our rationality with purpose. For him, presupposed objectivity is preferable to the view that objectivity is attained as a *result* of inquiry. This argument evokes Polanyi’s fiduciary portrait of personal knowledge: we need to trust in our skills of judgment as a presupposition for practicing good science or theology. Like Gregersen, van Huyssteen faults CR for promising that good explanations imply valid ontological conclusions. Van Huyssteen demurs: explanations spring, in part, from metaphysical commitments. Epistemological clarity does not cause the effect of ontological clarity. An ontological outlook spells out what is feasible epistemologically. However, this approach differs significantly from the criteria for a successful explanation that is advocated by McMullin for instance. In fact it seems to undercut the objectivity that van Huyssteen allows to occur in human judgment.

However, one benefit from van Huyssteen’s focus on judgment is a choice for one particular strand of pragmatism. Owing to his reliance on Rescher, van Huyssteen favours the pragmatism of Charles S. Peirce over that of William James. Many theologians today implicitly prefer James, and this is why van Huyssteen’s choice is compelling because Peirce has been cited by others as preferable to a kind of anti-scientific relativism present in the thought of William James.⁴⁰

Does van Huyssteen use Rescher in a reliable way? According to Rescher, rationality is realist while being situated and provisional, its realism informed by a teleological interpretation of functional rationality.⁴¹ In his early work, Rescher described realism as one of intent rather than a realism of achievement (echoing van Huyssteen’s distinction between the estimation of truth over the approximation of truth). In more recent work, the language of metaphysical idealism has vanished. Akin to van Huyssteen’s own negative assessment of the nonfoundationalist, narrative turn in theology, Rescher too has moved against the epistemological collapse advocated by Rorty and other relativists within the pragmatist tradition. CR’s validity thus receives some additional confirmation, to the extent it selects and appropriates pragmatist insights into how scientists judge and explain. Rescher has effected this alignment by distancing himself from idealism.

³⁶ Van Huyssteen, *The Shaping of Rationality*, 259 (emphasis mine).

³⁷ See van Huyssteen, *Alone in the World?*.

³⁸ See his “Postfoundationalism in Theology and Science,” 34.

³⁹ Van Huyssteen, “Postfoundationalism in Theology and Science,” 39.

⁴⁰ See Nicholas Rescher, *Realistic Pragmatism* and for an analogous distinction, see Mounce, *The Two Pragmatisms*.

⁴¹ Rescher, *Realistic Pragmatism*, 245.

Yet, the difficulty with the way in which van Huyssteen couches CR in postfoundationalist terms is that while he borrows from Rescher's pragmatist realism, he does not follow Rescher in allowing explanatory realism to inform a full-bodied realist epistemology. Van Huyssteen appears satisfied with what hermeneutics can accomplish for making more precise theological statements. But, while hermeneutical factors qualify the provisional nature of explanation, they do not account for the progress and success of explanations grouped in webs of disciplinary knowledge.

Now without CR, theology could not claim doctrinal development. Development is an idea of progress and indeed, nonfoundationalist frameworks have no way to conceive of progress. So, van Huyssteen's postfoundationalism goes some way in diagnosing the shortcomings of anti-realism and non-foundationalist epistemology. But as I say, Rescher, on whom van Huyssteen relies, has gone farther in the philosophy of science. While van Huyssteen acknowledges explanation and progress against a crude relativism or historicism, and while he recognizes the referential character of language, he denies specific metaphysical entailments that these factors prompt. By relegating the different disciplinary frameworks as inclusive of metaphysical *presuppositions* only, van Huyssteen restricts metaphysics to being presuppositions to inquiry rather than being conclusions proceeding from explanatory success.

So, van Huyssteen wants to criticize the narrative and experience-centered approaches of nonfoundationalist thought in order to show how theology can avoid relativism and epistemic irrelevance. But showing what theology needs to avoid and claiming the status of its explanations are two different things. As realistic as van Huyssteen is hermeneutically, he still lacks a focus on the progress of explanatory judgment in theology.

It is not a question of whether the basic commitments that nonfoundationalists tout are always biased. van Huyssteen sees clearly, for instance, that nonfoundationalists Murphy, Ronald Thiemann and Stanley Hauerwas, appeal to scripture in terms of justified belief in much the same way as any foundationalist would, except under the cover of 'communal discernment.'⁴² The holism of contextual webs of belief embraced by nonfoundationalists and pragmatists turns out to be just another version of foundationalism, where certain epistemological values are smuggled in as normative to the exclusion of others. van Huyssteen's diagnosis of the internal contradictions in nonfoundationalism is a critical move that should be a springboard for a full treatment of the relationship between discipline-based explanations and reference, truth and interpretation. Yet, he does not adopt the full realism of Rescher, since his own Kantian idealism and pragmatist contextualism, prevent him from allowing metaphysical implications to emanate from explanatory judgments.

Van Huyssteen remains content to observe the 'parallels' in explanation between theology and science. But, these parallels never meet in a unitary account of human judgment. His reticence to acknowledge more profound metaphysical implications for postfoundationalism has been noted by Jerome Stone, who notices how van Huyssteen uses the term 'explanation' to account for the epistemological terminus of interpretations of religious experiences yet he claims that van Huyssteen does not say what he means by explanation or religious experience.⁴³ This is an additionally critical observation, since this lack of constructive relationship between experience and explanation could be rectified were van Huyssteen to develop his analysis into an examination of success in scientific progress or the development of theological doctrine. I want to turn now and show how progress can be claimed in theology, in a way analogous to science. Bernard Lonergan's theological methodology is specifically designed as a programme of CR with the challenge of science in mind.

4 Lonegran's method and CR

So far, in proposing to revise the explanatory scope of CR in response to critics such as Murphy, Robbins and Gregersen, I have specified the importance of human judgment in explanations. This is a key factor in van

⁴² Van Huyssteen, *The Shaping of Rationality*, 107.

⁴³ Stone, "J. Wentzel van Huyssteen: Refiguring Rationality," 425. Cf. van Huyssteen, *The Shaping of Rationality*, 193.

Huyssteen's more careful yet still hesitant version of CR. I want to take this advance further by depicting an aspect of Bernard Lonergan's theological method, which advances a theological epistemology that presses the parallels that CR enshrines, but in a fuller, explanatory way.⁴⁴ The difference of analogical speech in theology notwithstanding, I claim that we may advance a theological version of retroduction, a way to account for theological judgments understood as successful, provisionally true explanations. Lonergan anticipated the eventual rise of theological nonfoundationalism, in his discussion of interpretation in *Method in Theology*, first published in 1973. Lonergan specified why historiographers cannot disallow objective readings of classical texts and the things signified there. Building on his understanding of interpretation, Lonergan outlines the well known explanatory nature of the tasks or "functional specialties" of history and doctrines.

Lonergan first expounds a theory of human judgment that is laid out in his philosophical opus magnum, *Insight*. There, judgment is the attainment of a 'virtually unconditioned.' According to Lonergan, there are conditions for the truth of an insight that require fulfillment in verification before one can affirm a 'yes' or 'no' to the insight. A judgment affirms that all relevant conditions for the truth of an insight have been 'virtually' fulfilled. All the further questions imaginable that are suggested by an insight have been asked and answered in order to affirm, revise or deny the insight. This formulation captures two things deliberately: it incorporates the provisional nature of truth seeking - the obligatory sense of asking about all that is needed to falsify the answers to the questions that led to the insight. Second, Lonergan's notion of judgment captures the Aristotelian-Thomist emphasis on the objectivity of a thing's substantial form in act rather than the Kantian idea of judgment as pertaining to a true, pre-supposed concept. A judgment means that there are no further questions to be asked, at least concerning the limited range of data/experience which the insight grasps. The limits reached by further questioning are those of the human imagination. This open-ended heuristic justifies Lonergan's use of the adjective 'virtual' to qualify the provisional nature of truth in any explanatory judgment. The provisionality of a judgment bears on the relationship of a true insight with other true insights, including those yet to be made. This is a summary picture of the way in which judgment serves a vital background role in shaping Lonergan's theological method.

Lonergan applies judgment specifically to the functional specialty 'doctrine' in *Method in Theology*, and this move resembles the way retroduction marks science. ('History' is also characterized in terms of being a set of judgments relied upon by theologians, but this is a somewhat more complex assessment on Lonergan's part.) Analogous to scientific retroduction, theological epistemology is not reducible to any simplistic form of inference, whether deductive or inductive. For this and other reasons, Lonergan's methodology is neither amenable to crude apologetics (deduction) nor to correlationism (induction).

In *Method*, Lonergan develops a theological method that operates in two stages. Lonergan articulates one vector of discovery from the first four functional specialties: research, interpretation, history and dialectics. With the second, properly theological vector of activity, there are the tasks of establishing foundations, doctrines, systematics and communications. Complementing the way of discovery in the first four functional specialties, in accord with four cognitional activities (sensing, understanding, judging and deciding), these further four tasks of the theologian form a unified set of verifying activities. The analogy with scientific method is plausible due to the way that retroduction speaks of explanations as true yet provisional in science. Explanations, like doctrines, are not proofs.

Lonergan attempts to dissolve the conflicts over differing theological contents by adverting to a single method that does two things with regard to doctrine. First, doctrines are retained as definitive judgments that are nevertheless open to re-formulation. Second, it allows theologians to speak with one another about what they are doing, based on an understanding of epistemically shared tasks. This is parallel to the way in which scientists communicate in light of their shared commitment to specific tasks within a single method. Whereas scientists deliberate on how to verify an explanation suggested by an insight according to a set of criteria for making that judgment, theologians advert to systematic theology in order to develop the understanding of God implied by a particular doctrine. Systematic understandings typically refer the theologian back to the 'prior' acts of interpretation, history and doctrine (functional specialties 2, 3, and

⁴⁴ Lonergan's *Method in Theology* develops a portrait of theological method that is simultaneously descriptive and prescriptive.

4) in order to revise the historical and foundational horizon (functional specialty 5) on which the doctrine (functional specialty 6) is judged and formulated.

The ascending and descending vectors of Lonergan's model of theological inquiry concern the nature of theological inquiry as a rational, referential, and personal self-appropriation. As methodical, it conceptualizes the activity of the inquirer, who may be a theologian or a scholar of religion in the first vector of four tasks but who must be self-consciously theological in the second vector of four tasks. Lonergan's method does not tie beliefs or doctrines to particular categories only but it does establish that successful explanations in doctrines are cognitive judgments made on the basis of conversion. Unlike van Huyssteen's approach, the ontological significance of a doctrine is not just imported from the foundational categories of theological inquiry as a presupposition. Rather, ontology is granted following doctrinal formulation in and through the systematic and the theological communication activities, functional specialties 7 and 8 respectively.

Readers of Lonergan's *Method in Theology* often wonder why Lonergan spends much of his last chapter on communications dealing with the distinctly abstract notion of ontology as opposed to staying with the practical matters of ecclesiology or ministry. One key reason for Lonergan's choice is his understanding of meaning as inseparable from the real. As for van Huyssteen, hermeneutics is inseparable from epistemological considerations. It is not to be conceived as a separate subjective activity in the way that Schleiermacher framed it. For Lonergan however, meaning, such as the common meaning that shapes ecclesial practice, is linked directly back to the metaphysical horizon suggested by foundational theology and specified by the explanations at the level of doctrine. Despite the language of achievement that marks Lonergan's theology, the common meaning spoken of in theological communication is an articulation of God's grace, causally effective in the religious conversion of the theologian, authentically formulated. Religious conversion is at the origins of a theologian's categories. So, on a theological horizon that is informed by the notion of grace, foundational categories are not so much chosen by the theologian as much as they are made available by God for the theologian. Thus, explanations, at the level of doctrine, do not issue from presupposed metaphysics. They provisionally formulate an explanation of what is received from God and then grasped as ultimately real.

So, Lonergan's notion of pastoral practice is a response to the reality grasped categorically at the level of foundations (functional specialty #5), tentatively identified as explanatory at the level of doctrine (functionality specialty #6) and systematically reflected in the context of other ways of understanding reality (functional specialty #7). Lonergan's CR is a realism of practice. As pragmatists contend, the most significant aspect of rationality is not any one concept or metaphysical invariant but the progressive way that reasonable and responsible persons arrive at judgments. Lonergan's account of theological method is both coherent with this pragmatism and it is explicitly cognitional, while not reducible to hermeneutical concerns. Unlike the pragmatist critics of CR already surveyed, Lonergan's method is parallel with scientific procedure up to and including the provision for explanation. As such, Lonergan is complementing van Huyssteen's portrait of rationality in terms of interpreted experience and the coexisting ways of knowing. However, he goes further than van Huyssteen in describing how and why explanation functions epistemically, methodologically and hermeneutically. In theology, doctrinal explanations are methodological not merely because they spring from metaphysical commitments in foundational categories, but because they derive from categories that are partially produced from acts of (sensed) research, (understood) interpretation and historical judgment which are then transformed by God's grace. Metaphysics is "presupposed" only in terms of Lonergan's final four functional specialties, but not presupposed by any of the first four functional specialties. So, the nature of the presupposition is different for Lonergan than it is for van Huyssteen and the other critics of CR.

Much more has been developed on the basis of Lonergan's development of a theological method elsewhere, and I restrict myself to the ways in which CR in Lonergan's account is methodical and explanatory, something cherished by theological realists. What is necessary to note from Lonergan is that the justification of CR as a theological epistemology arises from the success of theological method, not as something presupposed by artificially imposed categories. This entails that theological CR is not strictly a consequence of declaring doctrines explanatory on the basis of self-sufficient, presupposed metaphysics.

The functional specialties of history and doctrines are the two explicit explanatory modes of doing theology while the other functional specialties are explanatory indirectly. That is, while the eight tasks of theology play a role in the formulation of rational judgments, the third and sixth functional specialties - history and doctrine - are explicitly explanatory. Doctrine emerges as the significant functional specialty, wherein the theologian expresses conclusions together with the anticipated heuristic for the systematic meanings of those doctrinal explanations.⁴⁵ A doctrine explains what is true in the light of the process of dialectical engagement and in the light of foundational categories evident in light of one's own conversion. Conversant with a pragmatic provisionality, Lonergan sees doctrines not as totalizing statements of proof. In traditional accounts, theological doctrine is the *terminus quid*, a final stage of reflection on the nature of God or some aspect of God's action. For Lonergan, there needs to be an ongoing engagement between doctrines and other bodies of knowledge.

In systematic theology, doctrinal explanations are verified and clarified, and their expressions re-worked. This process is not only parallel with the process of formulating, correlating and verifying scientific explanations, it confirms the trust that must be shown in the acts of human judgment that form the basis for such explanations, whether in science or theology. In light of the cognitive basis for doctrinal explanation and systematic theological understanding, theology contains its own form of verification. So, the parallelism I advocate is that of explanatory success rooted in cognitive self-awareness. It is not a parallelism of descriptive metaphors, analogies and other disciplinary conventions as other CR advocates have argued in the past.

Much of the treatment of doctrine in Lonergan's *Method in Theology* deals with the issue of meaning and the tension between permanence and historicity, resulting in Lonergan's well known adaptation of Newman's idea of development of doctrine which Lonergan expresses thus: "when a truth is more fully understood, it is still the same truth that is being understood."⁴⁶ Similarly, in science, retrodution accounts for the reality of a physical entity or process in a basically similar pattern: criteria are employed to guide the verification of a theory's insight. The explanatory formulation of that original insight can be revised or radically re-formulated as new scientific contexts demand a new meaning be given to the older explanation. The older formulation is not necessarily false, but rather just a smaller part of the overall picture. The frequently cited example in this regard is that of Newtonian gravity giving way to Einsteinian relativity theory. Falling objects can be understood in a Newtonian way in the context of three dimensions. But Newton's theory cannot account for gravity since Einstein's discovery. Therefore, Newton's theory is inadequate for physicists who are now aware of the relationship between space, time and objects with mass.

The revision of doctrines takes place largely on account of the needs of different cultures and as such, it is loosely similar to what we know as verification in scientific contexts. It admits what CR suggests, which is the ongoing, progressive winnowing of the *explanandum*. The parallel between scientific and theological explanations can be demonstrated by a further example. Contrary to Gregersen's critique of doctrinal realism described earlier, the Nicene idea of Christ's consubstantiality with the Father and the Chalcedonian formula of 'one person, two natures' do not necessarily "eclipse[...] the reality of Jesus" (see note 25), although the history of scholasticism would appear to support Gregersen's allegation. A better way of describing the development of doctrine in terms of successive explanations is in terms of the interrelationship between meaning, the language specific to realms of meaning and the common meaning that emerges in successive true expressions of God. The development of doctrine is not a history of the eclipse of Jesus in successive explanations of him. It should be thought of as a series of progressively more adequate explanations in terms of different cultural presuppositions operative at different periods, like experimentation broadens the scope of verification of a theoretical explanation.

For example, John Polkinghorne has rightly stressed the Chalcedonian affirmation of 'one person, two natures' as simultaneously a way of explaining God's incarnation while leaving much else unexplained, by

⁴⁵ I am thinking here primarily of theological doctrines that are expressed by theologians but not to the exclusion of other kinds of doctrine such as church doctrines and methodological doctrines which Lonergan distinguishes in *Method in Theology*, chapter 12.

⁴⁶ Lonergan, *Method in Theology*, 325.

necessity.⁴⁷ In a similar vein, Karl Rahner spoke of Chalcedon as a beginning for Christological reflection not the end of it.⁴⁸ It is impossible to say that all possible explanations and their presupposed metaphysical frameworks have been exhausted by this doctrinal formula. The Chalcedonian formula, like the *homoousios* formula of Nicaea before it, is a way of ruling out certain options while affirming what is known with respect to Christ's character. In the case of Chalcedon, Nestorian portraits of Jesus were meant to be excluded, while the historic experience of the Church served as experiential criteria to verify both Christ's humanity and divinity. Thus, the hermeneutical and explanatory elements of oriented both to the real as grasped and the ongoing verification of the real, its meaning and explanatory value.

In the case of Christ's consubstantiality with the Father, we can see historical arguments that preceded the Nicene formula that clearly demonstrate the need for the turn to the theoretical category *ousia*. Common to patristic efforts to explain the Son's divinity prior to Nicaea was the metaphor of the Sun and sunlight in order to explain the relation of the Father to the Son. The radiance of the Sun is neither a light added to the Sun's light, nor another light, yet it is distinct from the Sun. As Athanasius pointed out however, the Sun metaphor is just an image, it does not pertain to what is in principle invisible. Charles Hefling cites Athanasius favourably by noting the methodological necessity of moving on from an image, which provides a preliminary notion for understanding Jesus' divinity, to a theoretical insight: "just as we entertain no material ideas about God though we know he is a Father ... so in like manner, when we hear of 'consubstantial' we ought to pass beyond our senses." For Hefling, Athanasius recognized the need to transcend the use of images, which means going beyond experience toward formulating an insight. Consubstantiality, unlike the sunlight image, is neither a sensible quality nor a pure flight of speculation. Rather, according to Athanasius, this theoretical term is an insight into the nature of a distinction, the logical point that "whatever is said of the Father is likewise said of the Son, apart from the name 'Father.'"⁴⁹

As explanations, the Nicene and the Chalcedonian formulae exemplify the theological form of CR as it pertains to God, using language that turns on theoretical and explanatory language rather than literal description. God is being explained realistically, yet not completely. In the case of God, the incompleteness is owing to both the provisionality of the explanation and the analogical nature of theological speech. Theoretical explanation is not understood as the equivalent to proof, nor should we be persuaded into believing this to be the case despite the scholastic effort to collapse explanations into syllogisms. But, the Nicene formula is precisely what Athanasius and others conceived it to be: an explanatory way of solving a theoretical problem. And the same is true of Chalcedon as Polkinghorne, in his own way of interpreting CR in theology, understands. We should recall that Athanasius' provision of the soteriological principle is a foundational check against a theoretical-explanatory exaggeration. Theology is a practical discipline and the soteriological principle alludes to the salvific basis for theological reflection. It serves as a foundational horizon or category that benchmarks the scope of doctrine. The lack of explicit connection between doctrines, foundational presuppositions and systematic correlations and verifications possibly motivates the critics of CR to warn against the push for a general methodological perspective between science and theology. van Huyssteen's hermeneutical and pragmatist theological epistemology is such a case of hesitancy. Theology needs a metaphysical structure both to presuppose the explanations of theological doctrine and to express what doctrines mean systematically. It is CR that identifies how theology does this in parallel with scientific judgment.

5 Conclusion

The various defenses and criticisms of CR have shown how theological method might profit from the debates concerning realism in the philosophy of science without forgoing the reality of God as the known object of theological inquiry. The potential of theological CR as it has been deployed by its' traditional defenders,

⁴⁷ See Polkinghorne, *Belief in God in an Age of Science*, 30-32.

⁴⁸ Rahner, "Current Problems in Christology."

⁴⁹ Hefling, *Why Doctrines*, 102-103.

Barbour, Peacocke and Polkinghorne has been shown to be hermeneutically lacking by several critics. On the other hand, critics of CR are too quick to limit the explanatory success of both scientific and theological claims. The more careful perspective of van Huyssteen has shown the need for a breakthrough up the middle between traditional CR and its critics. His recovery of human judgment as an important juncture point between the disciplines is a way forward that leads to the more precise insertion of judgment within a comprehensive methodology such as that developed by Bernard Lonergan. It is his hermeneutical way of discussing judgment that allows us to turn to Lonergan, whose endorsement of doctrinal development assumes a larger picture of explanation that is fully realist. Together, these various assessments show that the critics of CR have, on the whole, been too hasty in ridding theology of CR because of the assumption that CR does not even apply in science. These critics have nevertheless held onto a vague metaphysical realism in the reticent acknowledgement of its indispensable role in theology.

We should conclude by saying therefore that pragmatism and CR are not mutually exclusive approaches to rationality and interdisciplinary epistemologies. As van Huyssteen has shown, a pragmatic approach can be wedded to a realist epistemological position. Nicholas Rescher's recent work dealing with metaphysics as well as his efforts to clarify the conceptual breadth of pragmatism are strong supports for justifying a reading of van Huyssteen's pragmatism as a deeper form of CR than van Huyssteen has heretofore admitted.

This paper has attempted to go even further than van Huyssteen, as well as the other critics of CR, by showing that Ernan McMullin and Bernard Lonergan demonstrate the plausibility of specifically cognitive features in human judgment which determine why pragmatists can be realists in science on the one hand and theology on the other hand. The obverse of this claim is also implied: realists ought to be pragmatists in the sense that arguments for realism gather traction by appealing to scientific experience and epistemological reflection on that experience. Drawing on Peirce, McMullin's theory of retrodution neatly lays out the criteria of success, which are implied by the scientist's inquiries of testing and verification.

Bernard Lonergan was introduced into this paper for two reasons. First, his account of judgment as a true account of the virtually unconditioned existing thing is an important interpretation of knowledge claims. Lonergan shows how to break out of the Kantian idealism that still has its grip on the philosophical imagination, including, as I have suggested, in the pragmatism of van Huyssteen and the other critics of CR. Second, Lonergan acknowledges that in order for theology to be accepted as a discipline with parallel capacities for explanation, methodological elements are required to refute both the holist (relativist) and positivist (dogmatic) approaches to theology. While safeguarding the specificity of theological contents and inquiries, such a method ensures interdisciplinary relationships with other branches of knowledge. Recent theological criticisms of a generalized rationality, such as Andrew Moore's Barthian approach or that of Radical Orthodoxy should take note. Lonergan's method incorporates the operations of verification *mutatis mutandis* into his division of theological functional specialties by virtue of the differentiated tasks of the two vectors of inquiry. This methodology bears fruit in assessments of Christian doctrinal history as a history of expressions of theological meaning.

This article has sketched how a scientific realist approach that is aware of successful judgments not only justifies the parallelism between scientific and theological epistemologies, but also the way that verification is grounded in the act of human judgment in explanation, something science and theology share. In pointing to retrodution as the best way to affirm CR from the experience of science, we have a historical analogy for doctrinal development, a heuristic that describes the rationality of theological inferences: realist in aim, based in discovery, verification, yielding explanations that are provisional, and therefore revisable. When we transpose the thrust of CR from science to theology, we move from disciplines that pertain to unobservable entities in nature to the meaning of a God who has never been seen (Jn. 1:18). It is clear from the way that critics of CR have handled explanation and doctrine that much more philosophical work remains to be carried out in extending and making coherent the methodological programmes of van Huyssteen and Lonergan for theologians in dialogue with the natural sciences.⁵⁰

⁵⁰ I am grateful to an anonymous reviewer for comments that aided a better presentation of the ideas in this article.

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