Critical Rationalism Explained
by Darren M. Slade, PhD

Abbreviations:
CR Critical Rationalism or Critical Rationalist(s)
PBB Properly Basic Belief(s)
PR Philosophy of Religion
RBS Religious Belief System(s)
R/P/S Religious/Philosophical/Scientific
SR Strong Rationalism

1. The Problem of a Confirmation Bias:
   a. As Margit Oswald and Stefan Grosjean explain, a “confirmation bias” is a
cognitive illusion where “information is searched for, interpreted, and
remembered in such a way that it systematically impedes the possibility that the
hypothesis [e.g. a religious belief system] could be rejected – that is, it fosters the
immunity of the hypothesis.”
   b. In a conceptual psychological test involving the identification of number
sequences, Peter Wason discovered that people proceed optimally when testing
hypotheses, meaning they habitually seek to confirm their hypotheses rather than
to falsify them. Wason’s experiment demonstrated that people make an
assumption about reality and then proceed to confirm their assumption by
identifying data that is consistent only with their beliefs. The experiment showed
that even though the test subjects discovered confirming data, their hypotheses
were still incorrect because they did not attempt to locate data that was
inconsistent with their theories. In other words, their assumptions accounted only
for the confirming evidences but it did not account for the disconfirming data.
   c. Theologians and apologists oftentimes engage in a fallacious denial or purposeful
ignorance of counterevidence. This is most apparent when theologians and
apologists apply more credibility to information that confirms their RBS while
judging disconfirming data with greater harshness. This deceptively makes their
RBS impervious to genuine falsification.
      i. This can occur unconsciously as people seek to avoid appearing wrong or
abandoning their strongly held ideologies and belief systems.
      ii. Apologetics in particular mistakenly commits the fallacy of affirming the
consequent because it assumes that just because evidences exist for their
RBS, their RBS must, therefore, be true.
   d. The disciplines of theology/apologetics begin with the assumption that their RBS
is true and then builds a case for its defense.

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1 Margit E. Oswald and Stefan Grosjean, “Confirmation Bias,” in Cognitive Illusions: A Handbook on
2 Peter C. Wason, “On the Failure to Eliminate Hypothesis in a Conceptual Task,” Quarterly Journal of
Experimental Psychology 12, no. 3 (July 1960): 129-40.
3 See Oswald and Grosjean, “Confirmation Bias,” 79-92.
4 In syllogistic form, the reasoning is as follows: 1) If Christianity is true, then Christian evidences would
exist. 2) Christian evidences exist. 3) Therefore, Christianity is true. While Christian evidences lend support for the
validity of Christianity, the reasoning is faulty because it affirms the consequent. Christian evidences may still exist
for reasons other than Christianity being true (see Gordon R. Lewis, Testing Christianity’s Truth Claims: Approaches
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i. As John Frame correctly remarks, neutrality does not exist for the Christian apologist when examining evidences. To claim otherwise would be to tell a lie since the apologist already presumes the validity of Christianity.5

2. What is “Critical Rationalism” (CR) from a Philosophy of Religion (PR) Standpoint?6
   a. Definition of CR:7
      i. CR believes that “religious belief systems [RBS] can and must be rationally criticized and evaluated, although conclusive proof of such a system is impossible.”8
         1. “Critical” = an attempt to find the weak spots in a theory.
         2. “Rationalism” = the use of logical reasoning (inductive/deductive logical argumentation) in identifying the weak spots of a theory.
            a. Using “reason” and having “reasons” are not the same.
            b. CR is not the same thing as providing reasons in support of or as a challenge to a religious theory.
            c. Having reasons to believe something is not the same thing as being rational or using reason to evaluate something.
               i. Nor is having reasons to believe something the same thing as having evidence for a belief.
   b. Purpose of CR:
      i. The establishment of a rational methodology by which we can evaluate the merits of a religious belief system in furtherance of critical discussions rather than the provision of spurious justifications.9
         1. CR is a methodology, not a worldview. It is not inherently agnostic, atheistic, or religious. CR are free to construct an RBS so long as they subject it to critical & rational scrutiny.
         2. Remember: One of the most dominant characteristics of a religious cult is the assertion of doctrinal beliefs that are unverifiable and

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8 Peterson et al., Reason and Religious Belief, 69.
11 Cf. Miller, Out of Error, 50.
unevaluable where religious adherents are either discouraged or inclined never to authenticate or discredit the doctrine’s veracity.12

ii. “Contrary to what is taken for granted almost everywhere in the history of western philosophy …, it is not our beliefs, or our theories, that are rational, but the way we deal with them. It is the use of reason that marks out the rational person, not the provision of reasons.”13

3. CR on the Spectrum of Theological Method:
   a. Academia → Religious Studies → Philosophy of Religion (PR)14
      i. “Academia” = investigation of knowledge and the verification of facts without restriction or the promotion of an ideological/theological agenda
         1. Does not mean CR is inherently antithetical to any particular RBS prior to investigation and evaluation.
         2. Does mean that academicians and scholars cannot be uncritically devoted to the primacy of biblical revelation.
            a. For the academy, “theology” becomes an illegitimate academic discipline if it commits itself to an unfalsifiable source of authority.
      ii. “Religious Studies” = an attempt at an objective examination of the nature and effects of religion among persons and societies
      iii. “Philosophy of Religion” = “the attempt to analyze and critically evaluate religious beliefs in terms of consistency, coherence, and reasonableness.”15
         1. PR does not presume the validity of any specific RBS but, instead, explains and analyzes various RBS.16
         2. PR is not the study of religious history or theological doctrine.17
         3. PR stands apart from the subject matter it studies through the critical investigation of basic religious beliefs and ideas.
            a. It distinguishes the basic beliefs and analyzes each conception into its basic components.
      iv. PR vs. Theology & Apologetics
         1. Traditional Theology: a discipline where believers begin by accepting the truths of special revelation and then proceed to interpret and develop revelation into a systematic view of things.18

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13 Miller, *Out of Error*, 50.
15 Peterson et al., *Reason and Religious Belief*, 10; italics in original.
16 Clark, *To Know and Love God*, 297.
a. Or: a discipline within a specific religion that develops doctrines grounded in either natural or special revelation or both for the advancement of that religion.  

2. **Academic Theology:** parallels with Wolfhart Pannenberg’s definition of theology as the evaluation of a particular religious tradition’s belief system against the backdrop of religious history in general, as well as the natural and social sciences.
   a. Does not assume the validity of an RBS.
   b. Recognizes personal commitment does not determine true.

3. **Apologetics:** synonymous with “justificationism,” which seeks to defend what is already accepted as theologically true.
   a. “Apologetics has to do with defending, or making a case for, the truth of the Christian faith” either through repudiating opposition to Christianity (“negative/defensive apologetics”) or through proffering affirmative reasons in support of it (“positive/offensive apologetics”).
   i. The problem with apologetics is that it contains an inborn confirmation bias that presupposes the truthfulness of Christianity without taking the appropriate steps necessary to falsify its claims.

4. CR is not the same thing as theology or apologetics. It is a philosophy, which distinguishes between the content (the what) of one’s beliefs and the reasons (the why) for those beliefs.
   a. Philosophy is not concerned with validating beliefs based on divine revelation.
   b. Philosophy is concerned principally with methodology in answering how those beliefs can be developed on the basis of ordinary human methods of understanding and inquiry.

5. PR in general, and CR in particular, seeks first to establish whether an RBS is even viable enough to conduct theology & apologetics.

4. Origins of CR:
   a. CR developed out of the interchange between religious faith & reason, as well as the failures of of fideism and SR.
   i. “Reason” = “an innate power of the human mind that involves understanding, evaluating, and constructing concepts and arguments.”
   b. **Fideism** (FEE-day-ism) (aka: “Dogmatism” & “Apriorism”):
      i. The belief that a RBS is not subject to rational evaluation.

References:
20 Clark, *To Know and Love God*, 203.
24 This contrasts with William Rowe’s understanding of PR, which he argues is not to justify or refute a particular RBS (Rowe, *Philosophy of Religion*, 1).
25 Peterson et al., *Reason and Religious Belief*, 60.
ii. The basic argument in fideism is that every worldview relies on assumptions that cannot be proved true because they are properly basic.
   1. For religionists, the most basic assumption is the RBS itself.
   2. Requiring any portion of the RBS to adhere to the strictures of reason would require placing reason above the RBS and would result in making the human mind an idol.
   3. Those who stress faith and attack reason often place an emphasis on religious experience.

iii. Strengths of Fideism:
   1. Allows for “paradoxes,” mysteries, and even contradictions to be accepted in an RBS.

iv. Weaknesses of Fideism:
   1. Just about anything can be accepted as a properly basic belief when accepted purely on faith.
      a. But it doesn’t mean that the RBS is self-evidently true.
   2. An RBS still needs to be understood, which will inevitably require the use of human intellect & reason.
   3. Likewise, any argument for the defense of an RBS must rely on premises of some kind, which requires the use of reason.
   4. If no reasoned defense is given, then how does a person know which religion to believe in?
   5. When people simply accept an RBS without carefully considering whether the system is reasonable, then people will inevitably accept systems that are bizarre and dangerous. (e.g. cults of personality, Tome Jones’s Peoples Temple, Heaven’s Gate, etc.)
   6. Oftentimes, fideism permits people to ignore or entirely deny the presence of counterevidence to their RBS.
      a. This results in an unreasonable suspicion over every source of information that contradicts their beliefs.

v. The question is not whether “reason” has a place in belief systems but how much and where.
   1. Should reason be used to validate or invalidate an RBS?
   2. Should an RBS depend on having good reasons for believing the religion is true?

c. Strong Rationalism (SR) / Classic Foundationalism:27
   i. SR asserts that in order for an RBS to be rationally accepted, it must be possible to prove that the belief system is true.
      1. An inherent reliance on reason and human intellect for determining whether one will accept the belief system or not.
      2. An RBS should contain rational proofs and, therefore, be demonstrably and convincingly provable to any reasonable person.
      3. “It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence” (Mathematician W. K. Clifford: 1845-1879).

ii. Strengths of SR:
   1. A person should possess some reasons for holding an RBS rather than just a select one haphazardly due to cultural/familial pressure.

iii. Weaknesses of SR:
   1. It is impractical and unrealistic to expect all people in all circumstances to demonstrate that a particular religion is convincingly true.
      a. There is no room for faith in certain parts of an RBS since no RBS or doctrine is rationally guaranteed to be true.
   2. Likewise, what one person finds sensibly convincing, another will find lacking in reasonableness.
      a. Some people just lack the intellectual capacities or have latent prejudices that prevent reasonable arguments from convincing them.
      b. Reason is not always neutral b/c it is oftentimes based on one’s already-held worldview, which will dictate which arguments prove reasonable and convincing.
         i. This is where strong foundationalism as an epistemology tried to eliminate all biases and presuppositions by building a belief system on sure and undisputable foundations.
            1. We know now that there is no such thing as an undisputable foundation.
   3. SR causes permanent indecision.
      a. It demands a permanent regress of proofs that never allow a person to make a decision for or against God.
      b. SR is mere “justificationism”: the view that beliefs should always be justified in order for them to be reasonable, which creates a vicious circle of persistently asking for justification of any and every premise.\(^\text{28}\)
      c. SR creates a trilemma of infinite regress, vicious circle, and/or recourse to a dogmatic appeal to accepted “truths.”\(^\text{29}\)
   4. Ultimately, SR is self-referentially incoherent (it cannot be coherently applied to itself; self-defeating).
      a. The idea that someone should not accept anything unless it can be supported by argument or experience is an assumption that cannot be supported by either argument or experience.\(^\text{30}\)

   d. Critical Rationalism:\(^\text{31}\)
      i. CR believes we can and should rationally evaluate an RBS.
         1. From an epistemological and academic perspective, uncritically accepting a religion or doctrine purely on faith while making no

\(^\text{31}\) Peterson et al., \textit{Reason and Religious Belief}, 69-74.
attempt to subject the belief to scrutiny (with the understanding that the believer may have to renounce the belief during inspection) is intellectually flawed and blameworthy.\textsuperscript{32}

ii. But CR does not expect any RBS to be able to provide conclusive, universally convincing rational proofs that the system is true.

iii. Strengths of CR:

1. CR believes people should adhere to a reasonable RBS that is not haphazardly chosen, morbid, bizarre, antisocial, or dangerous.
2. CR believes people should possess reasonable arguments for \textit{why} they adhere to a particular RBS even if not every aspect of the religion can be demonstrably proven with apodictic certainty.
3. CR is modest in its expectations, realizing that inquirers cannot be overly confident or overly optimistic about the conclusiveness of their investigation.
4. Being critical of hypotheses and beliefs is more conducive for learning while being uncritical and dogmatic is not.\textsuperscript{33}
   a. “Imagine, for instance, that we can employ a procedure which has a propensity to accurately sort a peculiar class of propositions into ‘true’ and ‘false’ groups. A dogmatist will not be able to accept the results of such a procedure if they conflict with his commitments.”\textsuperscript{34}
5. CR recognizes that all epistemologies are biased toward the metaphysical worldview of its proponents, which prevents believers from being truly objective in their investigations.\textsuperscript{35}
   a. By deliberately seeking out disconfirming data, CR can safeguard inquirers from their own biases.
6. CR recognizes the limitations of reason’s ability to identify or even construct the correct RBS.

5. Limitations and Weaknesses of CR:

a. If all known RBS fail to meet its criteria, then CR will be unable to establish or discover the correct belief system on its own.
   i. It is limited principally to evaluating already-established theories and beliefs as they are constructed.
   ii. Withholding judgment until more data is gathered is not a weakness.

b. There is the potential that a person, after critically reflecting and investigating their own beliefs, may inadvertently switch from holding a true belief to holding a false belief based on the persuasiveness of the counterevidence and counterarguments.\textsuperscript{36}
   i. Of course, the reverse is also true.

\textsuperscript{32} Rowbottom, \textit{Popper’s Critical Rationalism}, 1.
\textsuperscript{33} Rowbottom, \textit{Popper’s Critical Rationalism}, 19-22.
\textsuperscript{34} Rowbottom, \textit{Popper’s Critical Rationalism}, 21.
ii. In terms of discovering truth, there are almost an infinite number of methodologies (e.g. reading tea leaves, astrology, animal entrails, Ouija board, etc., etc.). But there is only a limited number of highly reliable methodologies that produce accurate results.

iii. Selecting an RBS arbitrarily without some form of justification would be to adopt any number of methodologies at random, which is more likely to generate false results than it is to select the right RBS purely by chance.\(^{37}\)

1. Assuming Christianity is true, two-thirds of the world’s population have chosen other false religions. This means the majority of the world has selected false beliefs b/c of cultural or familial conditioning, demonstrating that their process of discovering truth randomly selected a methodology that resulted in a wrong answer.

c. People could inadvertently create “inconclusive reasons” for confirming or disconfirming an RBS by generating reliable reasons for belief or disbelief based on evidences and/or observations.\(^{38}\)

i. Those reliable reasons potentially remain inconclusive because people are still fallible and may make a mistake of interpreting their evidences and observations.

ii. CR would insist that people also formulate further methods for critically evaluating those reasons.

d. CR is problematic for religious believers because it might encourage them to change their religious beliefs.\(^{39}\)

i. CR becomes problematic only if the person’s RBS is false.

ii. Religious believers ought to be reassured that if their RBS is correct, then they have nothing to fear from the scrutiny of CR.

e. CR appears to be antisupernaturalistic or a dogmatic adherence to naturalism.

i. CR examines RBS as hypotheses to be tested and then either accepts or rejects these hypotheses based on its three criteria (see § 9 below).

ii. What looks like an automatic rejection of the supernatural or of divine revelation is really just CR having already considered these hypotheses and then rejecting them as a viable explanation.

f. There is the absence of a certain epistemological foundation for the methodological position of CR.\(^{40}\)

i. This is true of all fields of study and of all methodologies.

ii. Consistent fallibilism (see § 7.a below) insists that CR methods continue to be revised and improved.

iii. According to some, this makes CR self-evidently true (see § 8.b below).

6. CR vs. Properly Basic Beliefs (PBB):\(^{41}\)

a. Outline of PBB:

i. PBB claims that people should not set up general requirements in advance in order to accept an RBS.

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\(^{38}\) Rowbottom, *Popper’s Critical Rationalism*, 22.

\(^{39}\) Rowbottom, *Popper’s Critical Rationalism*, 32.

\(^{40}\) Albert, *Between Social Science, Religion and Politics*, 20-21.

\(^{41}\) Peterson et al., *Reason and Religious Belief*, 118-29.
ii. Instead, people should begin from the structure of belief and knowledge they already have and assume provisionally that this structure of belief is correct.

iii. PBB are “warranted” only if the belief is produced by cognitive faculties functioning properly (subject to no dysfunction) in an environment conducive for appropriate cognitive reflection according to a design plan that is successfully aimed at discovering the truth.

b. A CR Response to PBB:

i. PBB is an overreliance on personal intuition that derives from an arbitrarily selective and subjective “knowledge” filtered through a person’s cognitive, affective, socio-political, and historio-cultural paradigm, which routinely results in contradictory and unreliable pieces of personalized “knowledge” within the populace.

1. Trusting one’s intuition can be unduly haphazard and self-serving.
2. “We can’t trust intuition because it depends too much on myth, stereotype, prejudice, and received but unchecked wisdom. In addition, when confronted with a new problem intuition is very vulnerable to our tendency to stick with what we know.”

3. PBB allow people to hold contradictory RBS.
   a. Person A believes it is a PBB that God exists.
   b. Person B believes it is a PBB that God does not exist.

ii. PBB shifts the burden of proof and argues from ignorance.

1. The burden of proof for any position rests on the person who sets forth the position (one who makes a positive or negative claim about something). If and when an opponent asks, one should provide an argument for that position.
2. To ask others to accept a claim without any support, or to shift the burden of proof to them by suggesting that the position is true unless they can prove otherwise, is to commit the fallacy known as “arguing from ignorance,” since they are making a claim based on no evidence at all.
3. To satisfy the burden of proof, an RBS needs to present fallacy-free arguments in support of the RBS. Appeals to intuition, tradition, etc. are logical fallacies.
4. An PBB should not be considered “warranted” if one does not have any arguments whatsoever in support of the belief.

iii. From a CR perspective, advances in cognitive science and neuropsychology have revealed that what people think they know is oftentimes (though not always) the result of logical fallacies, cognitive biases, judgment errors, and memory distortions.

1. There are strong reasons to believe that humanity’s ability to think and believe *rationally* is seriously undermined unless people implement a methodology that informs themselves about the facts and curtails them from unrestrained assertions.

iv. **Illusion of Knowledge & Overconfidence Effect:**  
1. People tend to believe they know more about how the world works than they really do.
2. Likewise, the confidence people have in the correctness of their answers tends to exceed the actual percentage correct.
3. Example: Rope Around the World & Paper Folding
   a. Imagine a rope placed around the circumference of a flat Earth. If we wanted to lift the rope just one meter above the Earth, how much more rope would we need?
   b. Imagine that a really big piece of paper is approximately 0.001 cm thick. Hypothetically, if we were to take that piece of paper and fold it continually in half 45 times, how thick would the piece of paper be?

v. The idea that a belief is properly basic or warranted in no way guarantees the truth of that belief.
1. It is entirely possible for a PBB to be false, thereby needing some methodology to expose whether the RBS is true or false.
2. People cannot take for granted that a PBB is warranted or that their cognitive faculties are not engaging in faulty perception/reasoning.

vi. CR appropriately asks the person with a PBB, “If you were wrong, would you want to know about it?” And it forces the person with a PBB to ask themselves, “Am I wrong? If so, how would I know it?”

7. **Three Basic Characteristics of CR:**
   a. Consistent Fallibilism:  
      i. “Fallibilism” = in epistemology, the denial of certainty.
      ii. A CR will not recourse to either dogmatism or skepticism but, instead, believes in a “critical epistemology”: the idea of conceding the fallibility of human cognition without giving up the search for knowledge.
      iii. There are no sure foundations for any belief (no strong foundationalism).
      iv. Doubt and error are never fully eliminated.
   b. **Methodical Rationalism (Emphasis on Negativism):**

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46 Examples given in Coolican, *Research Methods and Statistics in Psychology*, 5. “The circumference of the Earth is $2\pi r$ where $r$ is the radius of the Earth. If the rope were 1 metre above the Earth all the way round then the new radius would be $r + 1$m. and the new circumference would be $2\pi (r + 1)$ m. which is $2\pi r + 2\pi$ m. This is just $2\pi$m. More than the original Earth circumference. $\Pi$ is approximately 3.14 so the increase in rope required is 6.28 metres. Note that this reasoning applies whatever the size of the sphere in question – so lifting a rope circling a melon or Saturn would in each case require $2\pi$ m. more rope than the original circumference” (p. 30; italics in original).

47 This is a conceptual game considering people can only fold a piece of paper in half roughly seven times.


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i. CR strongly believes in the usefulness of disconfirming evidence.
   1. Empirical inquiry ought to be used to test and/or refute theories under investigation.

ii. People should expose their hypotheses to a critical examination in order to identify which theory is preferable to other hypotheses.

iii. No view is free from all possible weaknesses or immune from criticism.

iv. People should also expose viewpoints to criticism in order to identify needed improvements, compare with alternative standpoints, and search for potentially new or better positions.

c. Critical Realism (Not Naïve Realism):
   i. CR believes the aim of knowledge is the comprehension and representation of reality or a particular aspect of reality.
   ii. Naïve realism states that reality by and large is as it appears to be according to our sense perceptions.
      1. Naïve realism is inherently subjective and susceptible to contradictory and even absurd conclusions.
   iii. CR believes there is an objective world of facts independent of our thoughts and beliefs that can be observed and examined, though not with infallible exhaustion, but our sense perceptions and hypotheses may not always accurately reflect reality.

8. Presupposed Dictums of CR:
   a. The avoidance of falsities and the pursuit and/or discovery of truth are together intrinsically the highest good.
      i. This is an implied precept derived from the other dictums.
   b. CR is self-evidently true.
      i. Problem: CR believes people should hold all their positions open to criticism, but this requires that CR also hold that statement to criticism, which appears to result in an infinite regress of criticisms and even circular arguing. Something would have to be uncriticizable.
         1. However, subjecting CR to criticism is not only welcome but it confirms the very foundation of CR. Any attempt to criticize CR is engaging in CR, making CR confirmed as self-evidently true.

         2. (A) All RBS positions are open to criticism.
            (B) Therefore, (A) is open to criticism.

            If (B) is true, then (A) is proved true.
            If (B) is false, then (A) is proved false.

51 Cf. David Miller’s discussion of “scepticism” in Out of Error, 54-58.
52 Darrell Rowbottom refers to the kind of critical rationalism that does not believe it is based on an irrational faith in reason as “pancritical rationalism” (Rowbottom, Popper’s Critical Rationalism, 9-18) while William Bartley refers to it as “comprehensively critical rationalism” (William Warren Bartley III, The Retreat to Commitment [New York: Alfred A. Knopf, 1964]).
CR does not claim that (B) is false, and anyone who does not think (A) is subject to criticism would appear to be accepting the basic tenets of CR by default.55

ii. Is the acceptance of CR just as guilty of fideism since it is merely an irrational faith in reason and rationality?56
   1. If the acceptance of reason is an irrational commitment, then accepting it on mere assumption legitimizes fideism and irrationalism.57
   2. Accepting reason and empiricism merely becomes a philosophical or scientific form of dogmatism.58
iii. Reason is self-evident and universal b/c in order for one to support the use of reason as an epistemological foundation, one would have to use reason. Likewise, in order for one to reject the use of reason as an epistemological foundation, one would have to resort to the use of reason, which makes their rejection self-defeating.59

c. People are responsible for their beliefs.
   i. Though there are indications that people do not have direct control, at least in many areas, over what they believe (called “doxastic involuntarism”), CR believes humans can intentionally place themselves in a position or take certain actions where their beliefs will be tested and, therefore, become susceptible to change.
   ii. CR ultimately believes that people are responsible for what they believe with respect to whether they put themselves into potentially belief-altering scenarios. To not do so would be intellectually blameworthy.60

d. RBS are hypotheses to be tested, never presumed true.
   i. Critical reflection of one’s own religious beliefs is a virtue because rational believers may discover that their belief is incorrect and, therefore, be one step closer to knowing the truth.61
   ii. CR adopts the assumption of Edward John Carnell and Richard Swinburne that RBS (e.g. Christianity) are merely hypotheses and are, thus, not self-evidently true. The introduction of future counterevidence could exclude Christianity as a viable hypothesis entirely. If a different theory accounted for more evidences with fewer difficulties, a CR would discard Christianity for a better explanation.62

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55 Rowbottom, Popper’s Critical Rationalism, 15-16.
56 Rowbottom, Popper’s Critical Rationalism, 5-6.
57 Rowbottom, Popper’s Critical Rationalism, 6.
58 Rowbottom, Popper’s Critical Rationalism, 6-7.
59 For a brief response to this type of argument, which claims that appealing to the self-evidential nature of reason does not help adjudicate the process of inquiry because people often disagree about what exactly is self-evident, see Rowbottom, Popper’s Critical Rationalism, 9-10.
60 Rowbottom, Popper’s Critical Rationalism, 4.
61 Rowbottom, Popper’s Critical Rationalism, 5.
9. The Attitudes of a CR:
   i. A CR is willing to entertain any religious, philosophical, or scientific position as a potentially viable and legitimate belief system.
   ii. A CR is willing to subject his/her religious/philosophical/scientific (R/P/S) position to criticism.
   iii. A CR is willing to seek out both confirming and disconfirming data for his/her R/P/S beliefs.
   iv. A CR is unwilling to appeal to irrational commitments or to faith in order to justify or defend a R/P/S belief system that is under scrutiny.
   v. A CR is unwilling to ignore or deny the criticisms and/or counterevidence against his/her R/P/S belief system.
   vi. A CR is unwilling to be wholly committed to a R/P/S belief system as being absolutely true, especially by means of suppressing counterevidence or preventing criticism.
   vii. A CR is willing only to be committed to maximizing truthfulness while minimizing falsities.

10. Three Criteria for Evaluating an RBS:
   a. Internal Coherency / Logical Consistency / Principle of Coherence:
      i. Law of Non-Contradiction:
         1. “If a belief system can be shown to involve a logical contradiction, then it absolutely cannot be true.”
      ii. Logical consistency is a negative test for truth, meaning it can only identify whether an RBS is incorrect but it cannot identify whether an RBS is true simply b/c it proves to be internally coherent.
         1. Carl Henry: “Without noncontradiction and logical consistency, no knowledge whatever is possible. Christianity insists that verification answers the question, ‘How can I know that this claim is true?’ and not the question of personal preference. To rational minds, the credibility of a religious claim, like any other, rests upon the availability of persuasive evidence and adequate criteria. The importance of intellectuality in theology, of cognitivity and concepts, of valid propositions, of logical system, therefore dare not be minimized…. Consistency is a negative test of truth; what is logically contradictory cannot be true.”
   b. Consistent with Known Facts / Factual Adequacy / Principle of Correspondence:
      i. “If a belief is found to be in conflict with well-established facts, then a rational person will have no choice but to modify or abandon that belief.”

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65 Peterson et al., *Reason and Religious Belief*, 71.
69 Peterson et al., *Reason and Religious Belief*, 71.
ii. Falsificationists are interested in whether a theory possesses correspondence or lacks correspondence to reality.\(^\text{70}\)

iii. Unfalsifiable and unverifiable assertions are not facts.

iv. Facts are derived from numerous epistemic (but relevant) sources:
   1. Philosophy, various forms of natural/social sciences, etc.

v. CR endorses a provisional skepticism about all facts:
   1. CR is a method of gathering data and testing hypotheses.
   2. “Facts” are claims that have been overwhelmingly confirmed and reconfirmed through the process of compelling observation and testing, resulting in a statement that sufficiently explains reality and remains unfalsified with the available evidence.\(^\text{71}\)
   3. If the data is inconclusive or not compelling, then CR withholds judgment until more data is gathered and tested.
   4. CR maintains a provisional endorsement of a conclusion b/c facts are subject to challenge and alteration based on future discoveries.

   c. Possesses Explanatory Power & Problem-Solving Ability:\(^\text{72}\)
      i. Ambiguous Definitions:
         1. “Whether they enlighten us about key areas of reality and human affairs.”\(^\text{73}\)
         2. “To what extent does this worldview enable us to make sense of the actual living of our lives?”\(^\text{74}\)

      ii. More Helpful Explanation:
         1. When discussing inferences to the best explanation, Michael Licona defines explanatory power this way: “The hypothesis that explains the data with the least amount of effort, vagueness and ambiguity has greater explanatory power. Said another way, the [researcher] does not want to have to push the facts in order make them fit his theory as though he were trying to push a round peg through a square hole.”\(^\text{75}\)
            a. Vagueness and ambiguity lack explanatory power specifically b/c they fail to explain causal relationships.
            b. Which theory makes more sense of the total data with the fewest inconsistencies and counterevidence?
         2. The hypothesis also helps to unify data and other areas of knowledge in the field of study.\(^\text{76}\)

\(^{70}\) Miller, *Out of Error*, 55.


\(^{72}\) For a detailed analysis of “explanatory power” when evaluating hypotheses, see the multiple essays in Richard Boyd, Philip Gasper, and J. D. Trout, eds., *The Philosophy of Science* (Cambridge, MA: MIT Press, 1991), 289-386.

\(^{73}\) Peterson et al., *Reason and Religious Belief*, 9.

\(^{74}\) Peterson et al., *Reason and Religious Belief*, 72.


\(^{76}\) Hasker, *Metaphysics*, 27.
a. The hypothesis provides a *plausible* explanation for observed phenomena that transforms raw data into a comprehensible and coherent elucidation.

3. The hypothesis will be comprehensive and simple.\(^{77}\)
   a. The hypothesis connects and relates multiple fields of study into a single framework.
   b. The hypothesis has “simplicity,” meaning it has the fewest amount of assumptions, *ad hoc* solutions, and unnecessary complexities that unifies the most amount of data (“principle of parsimony,” aka Ockham’s Razor).\(^{78}\)

iii. Basic Characteristic:
   1. Does the RBS answer more questions than it generates or does it generate more questions than it answers?
      a. RBS must avoid inflating its explanatory power/problem-solving ability by deliberately inventing new phenomena for it to explain or new problems for it to solve.\(^{79}\)

   d. Together, the three criteria are designed to eliminate certain faulty reasoning:\(^ {80}\)
      i. Minimizes *ad hoc* Explanations:
         1. Rather than accept that a belief has been falsified by certain counterevidence, the person continues to posit solutions that attempt to explain away the counterevidence as being the result of some other unfalsified and unverified anomaly or phenomenon.
      ii. Minimizes affirming the consequent:
         1. 1) If an RBS is true, then evidences exist in support of the RBS. 2) Those evidences exist. 3) Therefore, the RBS is true. While evidences lend support for the validity of a RBS, the reasoning is faulty because it affirms the consequent. The evidences may still exist for reasons other than the RBS being true.\(^{81}\)
      iii. Minimizes epicycling:
         1. An attempt to fit an item of recalcitrant evidence into an already-accepted paradigm, framework, or hypothesis. The already-accepted paradigm becomes unfalsifiable and irrefutable b/c any counter-evidence is artificially squeezed into the paradigm.
      iv. Eliminates appeals to common opinion, folk wisdom, intuition, emotion, tradition, self-interest, force, threat, or irrelevant (biased) authorities.
      v. Eliminates begging the question, causal oversimplification, confusing a necessary condition with a sufficient condition, arguing from ignorance, and wishful thinking.
      vi. Eliminates denying or ignoring the counterevidence:
         1. Refusing to consider seriously or unfairly minimizing the evidence that is brought against one’s claim; or

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\(^{79}\) Miller, *Out of Error*, 55.

\(^{80}\) See Damer, *Attacking Faulty Reasoning*, for a definition and explanation of the following fallacies.

2. Arguing in a way that ignores or omits any reference to important available evidence that might be unfavorable to one’s position, giving the false impression that there is no significant evidence against it.

vii. Eliminates rationalizations:
1. Using plausible-sounding but usually specious reasons to justify a particular position that is held on other, less respectable or irrational grounds (e.g. faith, religious experience).

viii. Eliminates special pleading:
1. Applying principles, rules, or criteria to other persons or situations while failing or refusing to apply them to oneself or to a situation that is of personal interest, without providing sufficient evidence to support such an exception.
2. Do Christian apologists apply these three criteria to other RBS but fail to do it to their own?

11. The Strategies of CR.  
   a. The Overall Tactic: find or develop the best arguments (which requires the use of fallacy-free reason) for the legitimacy of an RBS and then compare these claims with the arguments for alternative RBS, including an alternative agnostic or atheistic system that argue against the RBS.
      i. The specific “tactic” needed to falsify and/or confirm an RBS will depend on the particular type of hypothesis or religious doctrine being asserted.
   b. Negative Test Strategy (“falsificationism”):
      i. A determined attempt to falsify one’s own hypothesis.
      ii. Involves considering the main objections to an RBS.
      iii. It is the purposeful identification and/or development of contradictions, counterevidence, or failures in explanatory power against the RBS.
1. Places the pursuit of truth ahead of proving or defending a particular ideology by identifying which information would act as a defeater for the RBS and then seek to discover whether those defeaters do in fact exist.
2. This strategy is to counter any tendency for apologists to focus selectively on biased information or to ignore disconfirming details in order to fit their preferred narrative.
   a. This follows the insight from Karl Popper’s falsifiability methodology, which asserts that a proper hypothesis must be subject to testability and open to disproof.  
   iv. The negative test strategy is not identical with Antony Flew’s “principle of falsification,” which suggests that believers could not know whether their RBS were true if it were unfalsifiable (a claim that is itself unfalsifiable).  

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Critical Rationalism Explained
by Darren M. Slade, PhD

1. Rather, it recognizes that apologists can discover confirming evidence while still deduce an incorrect conclusion.
2. In order to avoid a confirmation bias, apologists should attempt to discover data that does not correspond to their hypothesis in order to determine whether the original hypothesis satisfactorily explains all of the data or partially considers only some of the evidences.

c. Positive Test Strategy ("verificationism," "positivism," or "confirmationism"): i. According to the philosophy of Karl Popper, CR is purely negative, meaning theories should only be tested critically (i.e. negatively).  
   1. However, trying merely to falsify an RBS will never yield positive knowledge and will only seek to undermine theories. This would be to commit the same extremist fallacy as justificationism only on the other end of the spectrum.
   ii. A positive test strategy tests a hypothesis by examining events or properties where they are expected to occur or where they are known to have occurred.  
       1. CR is still able to conduct a rational-positive approach to verifying their hypotheses within a limited scope of possibilities.
   iii. A positive test strategy is not a confirmation bias.  
       1. A hypothesis is conditionally true if the evidence supports the hypothesis and remains unfalsified.
   2. A confirmation bias searches only for confirmatory data without regard for possible disconfirming-falsifying evidence.
   iv. A positive test strategy is the search for empirical evidence or other data in order to provide an endless confirmation and reconfirmation of a theory under investigation.
       1. This is a soft form of positivism that recognizes evidence cannot conclusively prove a theory true w/apodictic certainty b/c future discoveries could falsify the hypothesis.
          a. Evidence never “proves” a theory true; it can only support its provisional acceptance or challenge its validity.
       2. This is not the same thing as “justificationism,” which views the principal purpose of rational inquiry as a self-serving justification for one’s own personal beliefs.

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85 Miller, Out of Error, 50.
87 Miller, Out of Error, 52-54.
88 This is in contrast to Norman Geisler’s method for testing a belief system’s truth value where he naïvely claims that it is logical to assume “[whatever] is undeniable is true” (Geisler, Christian Apologetics, 143). Unfortunately, this does not logically follow as a universal axiom. Undenialbility merely suggests that what is undeniable is only presently confirmed by the available data, but universal theories will always elude absolute verification due to the limitations of inductive logic.
89 Coolican, Research Methods and Statistics in Psychology, 7.
90 Miller, Out of Error, 53.
Bibliography


