

CIRCULAR RHETORIC AND LOGIC OF PARADOX

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1. Introduction

In the early twentieth century, Russell pioneered the formal study of paradox in logic.¹ He discovered that any type of vicious circle possessed the potential to cause a paradox to occur. His solution to avoiding the occurrence of a paradox was simply to eliminate any vicious circle or to render it invalid.² The goal was to keep the emerging system of Formal Logic sound and valid by eliminating or denying the very presence of these potentially damaging paradoxes. Thereafter, the scholarly consensus and trend were established to follow Russell's solution, and many scholarly disciplines still adhere to it even today.

Biblical scholarship is no exception, which has caused a devastating impact and has set up confusion by ignoring any literary circular constructs frequently found in the Bible, thereby rendering them invalid. As a result, the study of biblical paradoxes and circular-constructs has been one of the most ignored, confused, and controversial areas for the latter half of the twentieth century.³ However, a renewed interest has occurred due to the innovative pioneering approach in the study of paradox by Kripke (1975).⁴ The primary critical method in this paper to analyze various literary constructs in circular rhetoric and logic of paradox in the Bible is based on Russell (1910), Kripke (1975), and Min and Gupta (2010).⁵

In the past, the major work on circular rhetoric in biblical studies has been primarily associated with the Semitic influence in repetitive or tautological expression.⁶ Further, it should be noted that the study on biblical paradox has been mostly done in philosophy or theology, except one recent and noteworthy work on Mark by Santos (1995).⁷ The only serious and major scholarly work on circular rhetoric is the study of the reciprocal indwelling relationships in 1 John by Malatesta (1978), followed by Brown (1982).⁸

¹ Alfred North Whitehead and Bertrand Russell, *Principia Mathematica*, 3 vols. (Cambridge, England: Cambridge University Press, 1913), 1:37; and A. D. Irvine, "Russell's Paradox," in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (2009). Cited 8 July 2014. Online: <http://plato.stanford.edu/archives/sum2009/entries/russell-paradox/>.

² Alfred Tarski, "A Lattice-theoretical Fixpoint Theorem and Its Applications," *Pacific Journal of Mathematics* 5, no. 2 (1955): 285–309.

³ David Basinger, "Biblical Paradox: Does Revelation Challenge Logic?," *Journal of the Evangelical Theological Society* 30, no. 2 (June 1987): 205–13; Christian Cryder, "Reymond's Rejection of Paradox," *Trinity Journal* 22, no. 1 (2001): 99–112.

⁴ Saul A. Kripke, "Outline of a Theory of Truth," *Journal of Philosophy* 72, no. 19 (1975): 690–716.

⁵ Whitehead and Russell, *Principia Mathematica*, 1:37; Kripke, "Outline of a Theory of Truth," 690–716; Richard K. Min and Gopal Gupta, "Biblical Paradox and Coinductive Reasoning" (SBL IM2010, July 2010) [cited 8 July 2014]. Online: <http://biblicalparadox.files.wordpress.com/2012/11/sbl-im2010min.pdf>.

⁶ Wilbert Francis Howard, "Semitisms in the New Testament." *Accident and Word Formation*. Vol. 2 of *A Grammar of New Testament Greek*, by James Hope Moulton (Edinburgh: T. & T. Clark, 1929) 419–420; Anthony A. Hutchinson. *Semitic interference in the syntax of the gospel of john*. (The Catholic University of America, 2002) 132–133.

⁷ Narry Fajardo Santos and Narry Fajardo, "The Paradox of Authority and Servanthood in the Gospel of Mark," *Bibliotheca Sacra* 154 (1995), 452–60; Edmund B. Keller. *Some Paradoxes of Paul* (New York: Philosophical Library, 1974): 2–3. James D. Gifford, Jr. *Perichoretic Salvation: The Believers Union with Christ as a Third Type of Perichoresis*. (Wipf & Stock Pub, 2011).

⁸ Edward Malatesta, *Interiority and Covenant: A Study of εἶναι ἐν and μένειν ἐν in the First Letter of John*. [Analecta Biblica 69] (San Francisco: Biblical Institute Press, 1978): 34–36; and Raymond E. Brown, *The Epistles*

Following its traditional meaning, the working definition of “paradox” (παράδοξος) is defined as a statement or an event which is “contrary to opinion or exceeding expectation,” “unexpected,” “strange,” “wonderful,” or “remarkable.”⁹ This definition is flexible and pragmatic for the purpose and the scope of this paper, conservatively adhering to the meaning in the *Koine* Greek of the Bible.¹⁰ A plural form of paradox (παράδοξα) is found in Luke 5:26, denoting a series of the marvelous and wonderful things revealed by Jesus in word and deed.

The terms of cycle (κύκλος or κύκλος in Ecclesiastes 1:6), circle, circularity, infinite loop, and coinduction are used informally and interchangeably to designate any circular relationship. The reader is referred to the literature for an excellent introduction on circularity, nonmonotonicity, and modality in logic, which is used somewhat informally in this paper.¹¹ Two terms of logic which appear frequently in this paper and closely related to circular rhetoric and logic of paradox are “modal” and “nonmonotonic.” Modal logic refers to the logic of which validity changes depending on one’s perspective or aspect. A classic example is the two-stage coming of the Kingdom of God “already” and “not yet” in temporal modal logic in Luke 17:20–30. Another famous example is “give to Caesar what are Caesar’s, and to God what are God’s” in Matthew 22:21. Nonmonotonic logic signifies what has been true may not be true anymore, or what is expected in common sense or laws may not be held anymore. For instance, the law of “the righteous being blessed and the wicked being cursed” seems to be not functioning, for example, in the case of Job who is the righteous man in suffering with the allegations made by his three friends in their “monotonic” mind-set. The other example is found in the case of the man born blind where the disciples of Jesus suspected his blindness at birth as a divine punishment (John 9:1–5).

A brief survey of the selected examples is presented with the analysis of their literary circular-constructs to discover and classify some major patterns of circular rhetoric and logic of paradox. The selected examples in this paper include three paradoxes in Matthew 22:15–46, the Liar paradox in Titus 1:12, the divine “I-am” sayings in Exodus 3:14, the circular indwelling relationships in John 14:10–11, and two proof-methods in John 8:12–20. One distinctive proof-method for “I am the light of the world” is based on self-reference or circular reasoning, providing a new interpretive basis and framework for Jesus’ “I-am” sayings in John. Further, the difficult passage and paradox of 1 John 3:9 is discussed. With these concrete results, a new critical method in analysis of circular rhetoric and logic of paradox is proposed to fill the apparent gap in the biblical studies, to fix the apparent confusion or mistake in the past, to extend the scope of biblical exegesis and interpretation, and to rediscover the lost wisdom of the biblical writers. In this light, the paradoxes in Matthew 22:15–46 are reexamined for a deeper understanding in this new paradigm. Further, the theological framework of *Salvation History* (*Heilsgeschichte*) with the two-stage coming of the Kingdom of God (“already” and “not-yet” in Luke 17:20–30), and the testimony of John the Baptist (John 1:15, 30) is analyzed in this framework of circular rhetoric and logic of paradox. Finally, the difficult lesson in Hebrews on Psalm 110:4 has been analyzed and noted for circular “be-like” relationships (Hebrews 7:3, 15).

of *John* (New Haven, CT: Yale University Press, 1982): 195–96.

⁹Frederick W. Danker, *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*, 3rd ed. (Chicago: University of Chicago Press, 2000), 763; James Hope Moulton, *The Vocabulary of the Greek Testament* (London: Hodder and Stoughton, 1930), 483; Gerhard Kittel, *Theological Dictionary of the New Testament* (Grand Rapids: Eerdmans, 1964), 2:255; and Narry Fajardo Santos, “The Paradox of Authority and Servanthood in the Gospel of Mark,” *Bibliotheca Sacra* 154 (December 1997): 452–460.

¹⁰Peter Arzt-Grabner. “Greek Language in the Roman Empire”. *The Encyclopedia of Ancient History*, 1st Edition. Edited by Roger S. Bagnall, Kai Brodersen, Craig B. Champion, Andrew Erskine, and Sabine R. Huebner (Blackwell Publishing Ltd. Published, 2013) 2988–2990.

¹¹Saul A. Kripke, “Outline of a Theory of Truth,” *Journal of Philosophy* 72, no. 19 (1975): 690–716; Melvin Fitting, “A Kripke-Kleene Semantics for Logic Programs,” *Journal of Logic Programming* 2, no. 4 (December 1985): 295–312; Jon Barwise and Lawrence S. Moss, *Vicious Circles* (Stanford, CA: Center for the Study of Language and Information Lecture Notes, 2004); Gerhard Brewka, Jurgen Dix, and Kurt Konolige, *Nonmonotonic Reasoning: An Overview* (Stanford, CA: Center for the Study of Language and Information Lecture Notes, 1997); Grigoris Antoniou, *Nonmonotonic Reasoning* (Cambridge, MA: MIT Press, 1997); M. Fitting and Richard L. Mendelsohn, *First-Order Modal Logic*, softcover reprint of the original 1st ed. 1998 (New York: Springer, 1999); Edward Malatesta, *Interiority and Covenant: A Study of εἶναι ἐν and μένειν ἐν in the First Letter of John*. [Analecta Biblica 69] (San Francisco: Biblical Institute Press, 1978): 34–36; Richard Min, “Biblical Paradox and ‘I Am’ Sayings in the Johannine Literature” (Society of Biblical Literature—International Meeting, Amsterdam, Netherlands, July 2012); <<http://biblicalparadox.files.wordpress.com/2012/11/sbl-im2012min1.pdf>>.

In order to explore a new critical method toward circular rhetoric and logic of paradox in the Bible, the approach of this paper is distinctively computational.¹² Far from being complete or comprehensive, the scope and goals of this paper are rather modest, in order to demonstrate a promising new prospective and novel approach, and to bring renewed interest and understanding, with the hope of advancing in the twenty-first century the related works in the study of biblical paradox and “I am” sayings found in John.¹³

2. Selected Examples of Circular Rhetoric and Paradoxes

The five biblical passages were selected and presented in this section to illustrate various paradox patterns based on literary-structural and logical complexity, and to examine and analyze them for their circular literary-constructs and complexities.

2.1. Exodus 3:14

The first example is “I am who I am (אֲנִי אֲשֶׁר אֲנִי)” in Exodus 3:14.

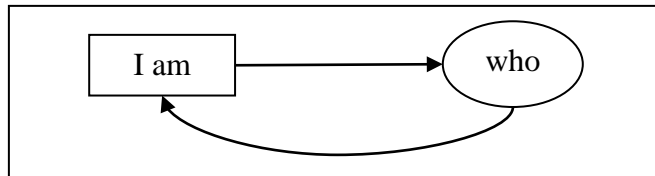


Figure 1. “I am who I am” in Exodus 3:14

In this example, a simple lexical or conceptual diagram clearly reveals its circular construct of “I am who I am.” A cycle is formed to reference oneself (self-referencing). A literary circular construct is used to define a concept (“I am”) with itself by self-referencing or circular reasoning. Though its exact semantic meaning or interpretation is still debatable, one may suggest a theological meaning for “I am who I am,” who is self-living or self-existing (that is, the living God who has no beginning and no end).

The Bible contains many similar patterns of self-referencing. For example, “the good one brings out what is good out of one’s own goodness, whereas the evil one brings out what is evil out of one’s own evilness” (ὁ ἀγαθὸς ἄνθρωπος ἐκ τοῦ ἀγαθοῦ θησαυροῦ ἐκβάλλει ἀγαθά, καὶ ὁ πονηρὸς ἄνθρωπος ἐκ τοῦ πονηροῦ θησαυροῦ ἐκβάλλει πονηρά) in Matthew 12:35. Here each example defines or characterizes a person with the very character or description that it attempts to describe. This type of literary construct is used to define, explain, describe, or even justify one concept by referring to itself in self-reference or in circular rhetoric. This literary pattern is also described as a “pleonastic relative clause modifying a noun to which its verb is cognate” (John 5:32 and 17:26) or as “tautology” (Zechariah 11:13; Jeremiah 19:2; Exodus 4:13; 1 Samuel 23:13; 2 Samuel 15:20; 2 Kings 8:1).¹⁴ And there are many examples of “tautological” circular expression or rhetoric in the Bible (e.g., “eye for eye” in Exodus 21:23–25 and Matthew 6:37–38; “a good tree with its good fruit” in Matthew 12:33; “to give Caesar what is Caesar’s, and to God what is God’s” in Matthew 22:21; “what is born of flesh is flesh” in John 3:6). Another

¹² Richard K. Min and Gopal Gupta, “Biblical Paradox and Coinductive Reasoning” (Society of Biblical Literature International Meeting, July 2010); <http://biblicalparadox.wordpress.com>.

¹³ Raymond E. Brown, *The Gospel According to John (I–XII)* (New Haven, CT: Yale University Press, 1966): 533–38; Raymond E. Brown, *The Epistles of John* (New Haven, CT: Yale University Press, 1982): 195–96; Edward Malatesta, *Interiority and Covenant: A Study of εἶναι ἐν and μένειν ἐν in the First Letter of John*. [Analecta Biblica 69] (San Francisco: Biblical Institute Press, 1978): 34–36; and Merrill C. Tenney, *The Bible; the Living Word of Revelation*, An Evangelical Theological Society Publication, Monograph No. 6 (Grand Rapids: Zondervan Publishing House, 1968).

¹⁴ Wilbert Francis Howard, “Semitisms in the New Testament.” *Accident and Word Formation*. Vol. 2 of *A Grammar of New Testament Greek*, by James Hope Moulton (Edinburgh: T. & T. Clark, 1929) 419–420; Anthony A. Hutchinson. *Semitic interference in the syntax of the gospel of john*. (The Catholic University of America, 2002) 132–133.

noteworthy and controversial example in 1 John 3:9 declares that everyone “born of God” does not sin for God’s seed dwells in him, and he is unable to sin for he is “one born of God” (Πᾶς ὁ γεγεννημένος ἐκ τοῦ θεοῦ ἁμαρτίαν οὐ ποιεῖ, ὅτι σπέρμα αὐτοῦ ἐν αὐτῷ μένει, καὶ οὐ δύναται ἁμαρτάνειν, ὅτι ἐκ τοῦ θεοῦ γεγέννηται). Here the subject-person (1 John 3:9) is expressed as “one born of God (ὁ γεγεννημένος ἐκ τοῦ θεοῦ).” This phrase “one born of God” is used again as the basis for “one born of God” being unable to sin. This is clearly an example of circular rhetoric. That is, “one born of God” cannot sin simply by nature of being “one born of God.”

2.2. John 14:10–11

The second example deals with a circular indwelling relationship.

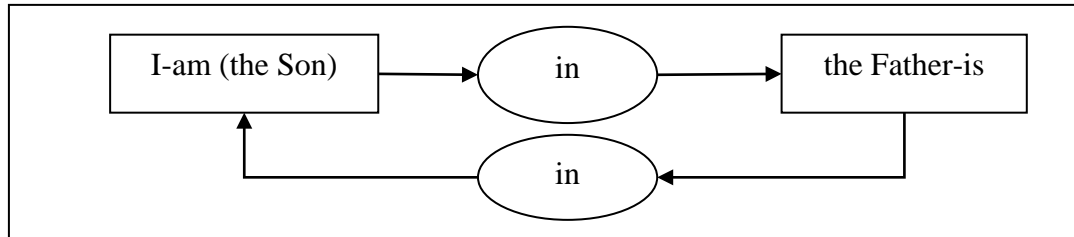


Figure 2. “I am in the Father and the Father is in me” in John 14:10

Here Jesus (the son) says: “I am in the father and the father is in me,” and “the father is in me and I in him” (ἐγὼ ἐν τῷ πατρὶ καὶ ὁ πατὴρ ἐν ἐμοί) in John 14:10–11. In contrast with the first example of “I am who I am” in Exodus 3:14, the construct here is circular, but with two persons mutually referencing each other in a circular or reciprocal indwelling relationship.

A similar example of a circular indwelling relationship is found between the son and his disciples (John 14:20; 17:21–23). Moreover, a close pair-relationship should be noted between the circular indwelling (ἐν ἐμοί ὁ πατὴρ καὶ ἐγὼ ἐν τῷ πατρὶ) in John 10:38 and the oneness (ἐγὼ καὶ ὁ πατὴρ ἓν ἐσμὲν) in John 10:30. Because of this close relationship, the Jews accused Jesus of making the claim that he was identical to God (σὺ ἄνθρωπος ὡν ποιεῖς σεαυτὸν θεόν) in John 10:33. However, one should note the equality of the Father and the Son (ἴσον ἑαυτὸν ποιῶν τῷ θεῷ) in John 5:18. Further, Jesus maintains his self-testimony, asserting that (1) he is in the Father and the Father is in him (John 14:10–11), that (2) he and the father are one (John 17:10; 21), that (3) the father is greater than he is (ὁ πατὴρ μείζων μου ἐστίν) in John 14:28, and that (4) it is the pair-relationship of “circular-indwelling” and “being one” (John 17:21–23), to distinguish the son from the father. This pair-relationship is used for the son and his disciples as the disciples are “one” and to be in the father and the son who are “one” (ἓν).

2.3. Titus 1:12

The third example is the well-known Liar paradox in Titus 1:12.

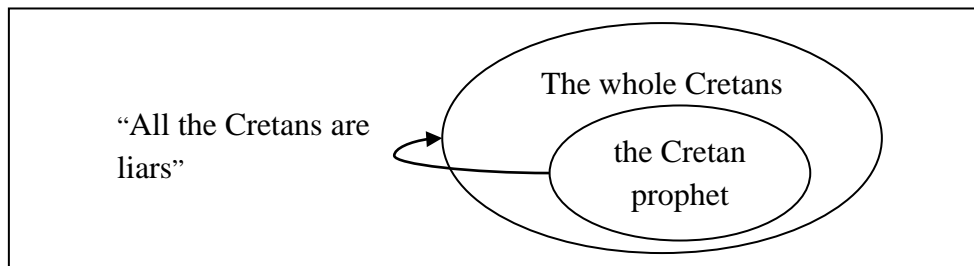


Figure 3. The Liar paradox in Titus 1:12

The text in Titus 1:12 presents a prophet who is a Cretan and thus a member of the larger group of Cretans to whom he is referring in his prophecy of self-negation. That is, the Cretan prophet is referring to himself, creating a circular reference by referring to the Cretan community of which he is a member. The paradoxical question and problem in Titus 1:12 is whether the prophet himself is also a liar as he declares that every Cretan is always a liar.

The difficulty in the Liar paradox is the presence of a self-negation in the circular relationship. In this paradox, even though not explicitly stated, a negative implication is clearly present. Negation in circular reasoning not only presents a challenge, but also complicates the matter with respect to its meaning and validity. Since the Cretan prophet in Titus 1:12 asserts that all Cretans are liars, this Cretan prophet is then also a liar, and thus his own statement (as cited by Paul in Titus 1:12) is a lie. In other words, the Cretan prophet's prophecy (which is true and is even affirmed by Paul) negates the validity of any truth-statement made by any Cretan (including himself). If granted and extended, this line of reasoning further shakes the credibility of Paul's assertion in Titus 1:13. However, one should also note that a liar need not tell lies all the time. That is, a liar may tell a lie with respect to all the statements in a unit of his or her discourse, mixed with some true statements, possibly to gain some credibility. Furthermore, a chosen prophet, whether he is a liar or not, may speak a true prophecy given by God as is the case clearly stated for the case of Caiaphas in John 11:49–52. Moreover, in Romans 3:4, Paul made an even stronger assertion saying that all human beings are liars (including Paul himself as he is the person writing this very statement). Many paradoxes in the Bible use self-negation. A few more difficult examples worthy of mention are the paradoxes of (1) self-denial discipleship (Mark 8:34), (2) saving by losing one's life (Mark 8:35), and (3) servant-leadership (Mark 9:35).¹⁵

2.4. Matthew 22:23–33

The paradox of Matthew 22:23–33 deals with marriage and resurrection.

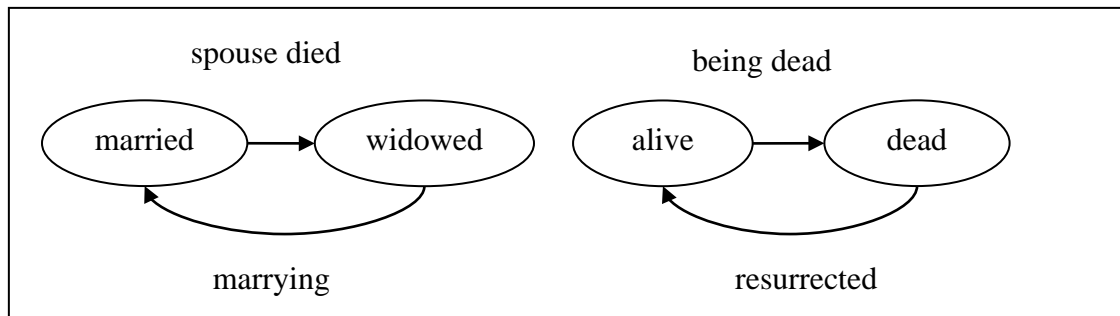


Figure 4. One's Marital Status and Life Status in Matthew 22:23–33.

The paradoxical question here is used in order to trap Jesus in an intellectual and theological dilemma. No solution to this paradoxical question seems to exist until Jesus resolves it (Matthew 22:29–32). Initially resolving this question of whose wife the woman would be in eternity seems impossible in this world of the living. The marital status and spouse of the woman changed with each marriage following the subsequent deaths of her spouses. Additionally, her life status would be ever-changing as she transformed from the states of being alive, dead, and then resurrected. One may note her marital status in a cycle of being married, then widowed, and then married after remarriage. Similarly, her life status was in a cycle of being alive, dead, and then back to being alive after resurrection. This aspect of temporal-modal reasoning in a paradox of circularity brings our attention to an additional and critical feature of a paradox for being nonmonotonic. That is, instead of one to be married and then to stay married forever, the marital status of the woman is not monotonic (to stay same forever) but nonmonotonic (changing each time with her next marriage). At the same time, the identity of the woman's husband changes with each new stage. Thus, the issue with regard to the identity of her husband is not absolute, but rather changes over time.

It is noteworthy that nonmonotonic reasoning is one of the most common motifs and themes in the Bible (e.g., Ecclesiastes 3:1–10; 7:14), seemingly contradictory in the framework of monotonic reasoning or principle. For example, if the righteous are to be blessed, and the evil are to be cursed (in the conventional paradigm of monotonic reasoning), then no valid justification exists for the suffering of a righteous man who is cursed or persecuted (as noted frequently in the biblical paradigm of nonmonotonic reasoning). A few similar classic examples in the Bible

¹⁵Narry Fajardo Santos, Narry Fajardo, "The paradox of authority and servanthood in the gospel of Mark," *Bibliotheca Sacra* 154 (1995), 452–460.

would make the case for Job’s suffering or a Christian who is cursed to be blessed (Matthew 5:10–12).

2.5. Matthew 22:41–46

The paradox in Matthew 22:41–46 extends the number of the constituents in the cycle.

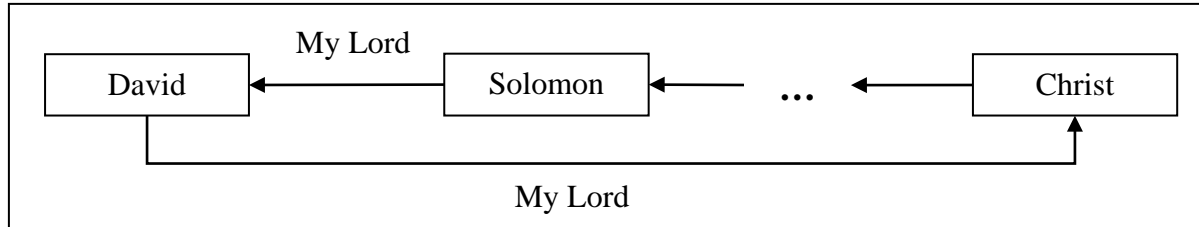


Figure 5. Lord-Servant relationship from David to Christ in Matthew 22:41–46

This example deals with the extended “father-son” relationship, which is compatible with the “lord-servant” relationship. A father who is also a king is the lord of his own son. This father-son relationship is further extended to the ancestor-descendant relationship. Then the question in Psalm 110:1 is why did David call the Christ, who is his own descendent, “my lord”? This clearly illustrates a circular relationship, which is a paradox, counterintuitive to the intended “father-son” relationship of David to the Christ, to be monotonic and linear. As shown in this example, some of the circular relationships may not be so clear or vivid at a lexical or syntactic level, but rather require a careful semantic analysis to make visible an underlying circular relationship.

In summary, we have surveyed and analyzed these five noteworthy and exemplary biblical paradoxes of circularity. A circular construct to form a circular relationship is detected and displayed on a lexical, syntactic, or semantic level. Further, a circular relationship can be complicated by a layer of negation as found in Titus 1:12. As noted in these examples, a cycle can be constructed with one concept in self-reference as in Exodus 3:14, two concepts in circular relationship as in John 14:10, many concepts chained in a cycle as in Matthew 22:41–46, one concept referring to a set where the concept is its member as in Titus 1:12, and a cycle with a negation. Some distinctive features with the biblical paradoxes are circular, modal, and nonmonotonic. The present list of these patterns and features in this paper is by no means complete or exhaustive, but rather is waiting to be explored and extended in future study.

3. Two Proof Methods in John 8:12–20

A noteworthy example of a self-reference being used as a proof method is found in John 8:12–20. Here Jesus makes the claim himself saying, “I am the light of the world” (Ἐγώ εἰμι τὸ φῶς τοῦ κόσμου) in John 8:12. With regard to this claim, the Pharisees immediately accused Jesus of projecting an invalid self-testimony. One should note that the testimony of Jesus is indeed a circular reasoning, as it is also acknowledged by Jesus (σὺ περὶ σεαυτοῦ μαρτυρεῖς· ἡ μαρτυρία σου οὐκ ἔστιν ἀληθής) in John 8:13. Further, Jesus defended the validity of his self-testimony (κἀν ἐγὼ μαρτυρῶ περὶ ἐμαυτοῦ, ἀληθής ἐστιν ἡ μαρτυρία μου) in John 8:14. Citing two witnesses according to the Law in his defense, Jesus further provided a lawful testimony (καὶ ἐν τῷ νόμῳ δὲ τῷ ὑμετέρῳ γέγραπται ὅτι δύο ἀνθρώπων ἡ μαρτυρία ἀληθής ἐστιν. ἐγώ εἰμι ὁ μαρτυρῶν περὶ ἐμαυτοῦ καὶ μαρτυρεῖ περὶ ἐμοῦ ὁ πέμψας με πατήρ) in John 8:17–18. Thus, it is worthy to note the two distinctive proof methods presented by Jesus in John 8:12–18.

3.1. Two Proof Methods

First, using a circular (coinductive) reasoning (John 8:12), Jesus declared his self-testimony with his own justification in John 8:14. Here Jesus argued the validity of his self-testimony even when testifying on his own behalf. His argument and defense is based on his own supernatural and omniscient knowledge about himself of knowing where he came from and where he is going. In contrast to his own defense, Jesus argued that they (the accusers) did not know where Jesus came from or where Jesus was going. This claim further reveals that Jesus not only knows their inner thoughts (John 2:24–25), but also their origin and destination (John 8:44).

Second, using a lawful (inductive) reasoning (John 8:17), Jesus provided two witnesses in compliance with the acceptable legal requirement imposed by the Law (Deuteronomy 19:15). Interestingly, the accused (Jesus) was also qualified as a witness to defend himself. The accusers accepted at least a part of Jesus, but then sought the claimed second witness (the father of Jesus) to be in witness stance (John 8:19). Clearly, the accusers were willing to accept both witnesses (Jesus and his father) as mere men. Later, one may note at least one more independent witness (John 9:29–33) who is willing to stand up in the witness stance to defend the validity of the self-claim of Jesus as being the light of the world. He is the man born blind whom Jesus healed. He boldly came forward to testify for Jesus about who Jesus is (John 9:17) and from whence Jesus came (John 9:30–33).

3.2. John 5:31 in the Light of John 8:12–20

From this perspective, two conflicting statements by Jesus found in John 5:31 and John 8:16, are worth noting, with respect to the validity of his own self-testimony.¹⁶ However, the conflict caused by these two statements could be easily resolved with a simple analysis of each context in its own modal aspect. In John 5:31, Jesus denied the validity of his own self-testimony, as this statement is valid according to the Law. In contrast to John 5:31, Jesus affirmed the validity of his self-testimony based on his own divine knowledge and self-reference (John 8:16). As noted in the paradox of paying tax to Caesar or not (Matthew 22:15–22), a model set of two contradicting interpretations or solutions could be valid. Thus in these multi-modal layers of one according to the Law, and the other according to the divine self-reference, one may resolve these seemingly-contradicting claims of Jesus in John 5:31 versus John 8:14. That is, each claim has its own valid model in either lawful or divine aspect. With this insight, one may take a fresh look at the four witnessing agents (John 5:31–39) provided to substantiate the proof that Jesus is the Christ (John 20:31). The four-fold proof is based on John who is a credible prophet (Isaiah 39:3–9; John 1:19–37), the work of the miracles as the divine sign (John 2:11; 20:30–31), the father as a witness (John 1:33–34; 12:28), and the Scriptures as the proof text for the Christ (John 5:39). As noted in John 8:17, it is sufficient for Jesus to present one more individual other than himself to defend his divine “I am” claim, according to the Law. Furthermore, the miracles performed by Jesus are used as the signs and, thus, were a means of proof to authenticate the divine “I am” claims of Jesus, as noted in John 10:25, 38.

3.3. Exodus 3:14–15 in the Light of John 8:12–20

One may notice a close parallel between John 8:12–20 and Exodus 3:14–15 with respect to the pattern of the two-proof method. First, in Exodus 3:14, God identifies himself with respect to himself. This is clearly a self-referencing proof method, which is clearly a circular proof method. Second, in Exodus 3:15, God identifies himself by referring the people of Israel to their most credible three witnesses: Abraham, Isaac, and Jacob. These three persons are not only the founding fathers of the people of Israel, but also are the living witnesses of the living God (Matthew 22:32). This is clearly a lawful and inductive proof method.

A similar provision for a proof method and an authentication process is explicitly stated and mandated in the Bible (Deuteronomy 18:21–22) to safeguard against a false prophet (Exodus 20:16) toward a secure system of prophecy and revelation. Many examples are found in the Bible for a model of “identification-authentication” or “challenge-response,” for example, with John (John 1:19–27) and Jesus (John 6:30). The secure system of biblical communication warrants the challenge-response model, using the “sign” as one of the most prominent proof methods in the Bible (Deuteronomy 18:19–22; Isaiah 7:10–17; John 20:30–31). This elevates the necessity and interest toward the biblical concept of sign as a proof method in the identification-authentication process (e.g., John 2:11). Conversely, one may find the developing stages or processes of individual faith-models as a proof process (e.g., for Peter in John) in the formation, growth, and maturity of one’s faith. For example, Peter has gone through a series of the stages in faith through (1) the indirect, albeit credible personal testimony of his brother Andrew (John 1:35–42), (2) a direct and concrete self-experience of the unshakable “sign” as a proof (John 2:11), (3) a doubt and controversy (John 6:60–71), (4) a confirmation of the faith (John 16:29–31), (5) an ultimate shake-and-break test (John 13:36–38 and 16:32–33 for John 18:25–27), and (6) a commencement (John 21:15–18). Further, one may extend the current view and scope of paradox beyond the literary genre of discourse and rhetoric into the realm of

¹⁶Merrill C. Tenney, *The Bible; the Living Word of Revelation*, An Evangelical Theological Society Publication. Monograph No. 6 (Grand Rapids: Zondervan Pub. House, 1968): 107–108, 144–145.

action and a proof method, to view the miraculous signs in the Bible under the category of paradox in action, and as a proof to enhance the meaning of paradox in word or deed (as noted in Luke 5:26).

4. “I am” Sayings in John

One distinctive narrative-feature in John is the abundant usage of the first person pronoun (ἐγώ) and the “I am” phrase (ἐγώ εἰμι) narrated by Jesus. As noted by the Pharisees in John 8:13, all of these metaphorical “I am” sayings are essentially self-testimonies of Jesus.

4.1. “I am” as Interpretive Key

Two metaphorical “I am” sayings are found in John 10:1–18. The discourse begins with a figure of speech (παροιμίαν—parable, proverb, or riddle) in John 10:1–5. For a practical reason, this metaphorical story in John 10:1–5 is viewed as a proverbial “parable” in this paper. The discourse begins with a distinctive “amen, amen” introductory opening statement by Jesus (John 10:1), uniquely observed in John. As usual, the audience does not understand the meaning of the parable, that is, its hidden and intended message. Noting the inability of the audience to understand in John 10:6, Jesus provides a key (an aid to the audience) to unlock one part of the hidden message (its intended meaning or interpretation) of the parable, using “I am” (ἐγώ εἰμι) as the key to the partial and modal interpretation of the parable. The first key is “I am” the gate, designating the true identity of the gate (John 10:7). The second key is “I am” the good shepherd, designating the true identity of the good shepherd (John 10:11). A few interpretive notes should be understood. First, a distinctive modal approach could be made possible to allow at least two interpretive solutions. Second, the true identities of many other metaphorical figures in the parable are still hidden (e.g., who are the gatekeeper, the sheep, the thieves, the hireling, or the wolf in the story?). Thus these two keys of “I am” do not provide a complete solution (interpretation) of the parable in John 10:1–5, but rather each to a partial solution.

A few distinctive features of the Johannine parable in John 10:1–5 with its interpretation in John 10:7–18 should be noted in contrast with the synoptic parables. For example, the parable of the seed-sower in Matthew 13:3–9 (in a fixed and static content) with its complete interpretation in Matthew 13:18–23 provides an exemplary case to be compared with the parable and its interpretation in John 10:1–18. The parable in John 10:1–5 is explained (or interpreted) with the first-person key of “I am” to reveal the hidden or intended meaning. In contrast, the figures in the synoptic parables and their interpretations are mostly in third-person and rarely are in second-person (Matthew 5:13–16). Second, the parable in John 10:1–18 is interpreted partially to the general audience. In contrast, the parable in Matthew 13:3–9 is interpreted completely and to the disciples only in Matthew 13:18–23. Third, the parable in John 10:1–18 is unfolding as it is being interpreted with the keys, by expanding or adding to the story of the parable with further parabolic materials (blended with the intended message), in a continuous and dynamic narrative-frame. In contrast to John 10:1–18, the two stages of presentation and interpretation of a parable are usually clearly marked and distinguishable. Thus, the content of a parable in scope is mostly fixed or static to be interpreted, and exclusively for the disciples (e.g., Matthew 13:10–13). Finally, the effect of the rhetoric process and framework of the parable in John 10:1–18 generated catastrophic offense, controversy, and disturbance among the general audience (John 10:19–21). In contrast, in the synoptic gospels, the effect and outcome of the telling of a parable was mostly met with the general audience exhibiting no understanding followed by a general sense of bewilderment, but with the disciples learning a significant lesson (e.g., Matthew 13:10–17, 36; 14:51; 15:15; 16:6–12; 17:10–13).

This pattern in John 10 is clearly observed in John 6. First, Jesus claimed to be the “bread of life” (John 6:35), using “I am” as the key to unlock the story of “the true bread of God” from heaven—the one who gives life to the world (John 6:31–34). Second, Jesus gave a partial interpretation of the parable to his audience, thus inviting them to eat his flesh (meaning to receive his Word, as explained in John 6:63). Third, Jesus expanded the parable of the bread of life (as his flesh) to be eaten, and the living water (as his blood) to be drunk (John 6:35). Thus, this rhetoric process and framework (blending of real and symbolic concepts) generates a catastrophic confusion, disturbance, and controversy, especially among the Jews (as noted in John 6:41, 52, 60, 66) as the story unfolded with a partial interpretation and with additional materials in the form of a metaphor.

4.2. A Unifying Framework for “I am” Sayings in John

This new perspective provides a fresh new insight to the understanding of Jesus’ metaphorical “I am” sayings found in John. These “I am” sayings are used as the keys to revealing the true identity of the metaphorical figures presented by Jesus in the form of self-claims. These metaphorical “I am” figures include: the bread of life, the living water, the gate for the sheep, and the good shepherd. Further, somewhat similar, yet different presentations of the metaphorical “I am” sayings are found in John 8:12 (“I am” the light of the world), John 11:25 (“I am” the resurrection and the life), John 14:6 (“I am” the way and the truth and the life), and John 15:1 (“I am” the true vine).

First, there is no preceding parable (that is, a metaphorical story or a proverbial teaching in figure of speech), in an explicit form, as noted in John 10:1–5 or John 6:31–34. However, a real-life case (experience as a story) is used to support the self-claim of Jesus. For example, the self-claim of “I am” the light of the world in John 8:12 is clearly substantiated with the story of a man born blind gaining his sight in John 9, and the self-claim of “I am” the resurrection and the life in John 11:25 is clearly manifested in the resurrection of the dead Lazarus in John 11. Second, the message of the “I am” saying encountered various responses and reactions varying from hostility to loyalty with regard to the accusation in John 8:13 or the affirmation in John 11:27. Third, the discourse in John 8:12–59 is engaged by the Jews with hostility and aggression. In contrast, Jesus and his disciples engage the discourses in John 11, John 14, and John 15, with the result of the disciples’ faith being enhanced. Finally, the setting of the discourse in John 8:12–59 is totally open to the public. In contrast, the setting of the discourse in John 14–15 is that of an intimate and closed fellowship, whereas the setting of John 11:25 is in public, but Jesus addressed his “I am” saying to one person (Martha) in particular. Jesus’ audience (the Jews) understood relatively well the “I am” the light of the world message in John 8:12. They challenged and accused him of self-claiming (in contrast to John 6:41, 52, 60, 66). In addition, the rich thematic topics in John 8:12–59 are observed with an array of the dualistic (mutually negating or bipolar) concepts of: (1) light versus darkness, (2) life versus death, (3) freedom in the Son versus slavery under the sin, (4) truth versus lies, and (5) God the Father versus Devil the father.

This concludes a brief survey of the metaphorical “I am” sayings in John. As noted, John contains two classes of metaphorical “I am” sayings. The first class consists of metaphorical “I am” sayings with a preceding metaphorical (or typological) story of which the identity (of the key figure or object) is to be interpreted (revealed) with “I am” as the key, as noted in John 6:31–34 (with John 6:35–71) and John 10:1–5 (with John 10:6–18). The second class (pattern) consists of metaphorical “I am” sayings without a preceding metaphorical story. However, the story is assumed to be well-known to the audience (as a background theory or as common sense). Therefore, there is no need for Jesus to repeat the well-known story, but rather to reveal the true identity of the key figure of the well-known story with “I am” as the key. This rhetorical pattern seems to keep recurring in John 8:12 (“I am” the light of the world), John 11:25 (“I am” the resurrection and the life), John 14:6 (“I am” the way and the truth and the life), and John 15:1 (“I am” the true vine). All the predicates of these “I am” sayings are well-known to the audience with their familiarity with the Old Testament stories. Some of the well-known examples in the Old Testament with the metaphorical “I am” sayings in John include: (1) the bread from heaven in John 6:31 with Exodus 16:15, (2) the light of the world in John 8:12 with Psalm 36:9, Isaiah 9:1–3 (also noted in Matthew 4:14–16), and Isaiah 42:6–7, and (3) the good shepherd in John 10:11 with Psalm 23, Isaiah 40:10–11, Jeremiah 23:1–6, and Ezekiel 34:11–16.

5. Circular Rhetoric in the Johannine Epistles and the Revelation

A brief survey on the Johannine Epistles and the Revelation reveals a few interesting patterns with respect to the “I am” sayings and circular in-relationships.¹⁷ First, the metaphorical “I am” saying as noted in John is observed only in the Revelation (1:8, 17; 21:6; 22:13). Second, the circular in-relationships (of “be-in” and “dwell-in”) are observed only in the Johannine Epistles (especially in 1 John). These patterns are somewhat expected within the corresponding literary genre of each book. For example, 1 John is an epistolary work where, as the author, John is addressing his fellow Christian brothers, expressing and reflecting in first-person monologue his own understanding of God the father and his son (as both persons are expressed in third person). In the Johannine epistles,

¹⁷ Raymond E. Brown, *The Epistles of John* (New Haven, CT: Yale University Press, 1982): 195–96; Edward Malatesta, *Interiority and Covenant: A Study of εἶναι ἐν and μένειν ἐν in the First Letter of John*. [Analecta Biblica 69] (San Francisco: Biblical Institute Press, 1978): 34–36.

no intervening external event or engaging multi-person discourse is present (in contrast to John or the Revelation). The Revelation is a prophetic and apocalyptic document (Revelation 1:1; 22:18–19) containing a vivid eyewitness report from John’s perspective. John often witnessed and vividly recorded the “I am” sayings of Jesus in first person.

The circular in-relationships (with the verb “be” or “dwell,” or without a verb but understood in context) are found in abundance in 1 John with rich and insightful theological assertions and implications about Christians (as being born of God and in God). For example, one in Jesus or being born of God does not sin and cannot do sin (1 John 3:6–9; 5:18). Similar claims regarding sinlessness or impeccability (1 John 3:9; 5:18) are also noteworthy for everyone “born of God.” As the author of 1 John addressed his words to “my children” (1 John 2:1), the purpose of 1 John is distinctively pastoral and exhortative (1 John 2:1), to build and maintain a strong and effective Christian identity and fellowship, and to guard against those who deceive (1 John 2:26) and who are antichrists (1 John 2:22).

Dodd (1946), followed by Malatesta (1978) and Brown (1982), notes about this “remain in” (or “abide in”) formula in 1 John 2:5, as characteristic of the Fourth Gospel, “not found (verbally) in the sources which are our authorities for Hellenistic mysticism.”¹⁸ Brown (1982) further elaborates this concept of divine indwelling as an “important Johannine idea in the Old Testament and intertestamental Jewish writing” and “to keep the Johannine view of divine immanence distinctive,” noting that “this formula avoids that identification with divinity that marked many Hellenistic systems” by Hauck (Kittel 4:576). Moreover, the circular indwelling relationships should be recognized to enhance this line of argument for the Johannine characteristics and distinctiveness toward the authorship of John.

5.1 Everyone “Born of God” in 1 John 3:9

One of the difficult problems in 1 John is a paradox of: (1) the Christian as a sinner in need of confession of one’s own sin, and thus in need of God’s forgiveness (1 John 1:8–10); and (2) the impeccability of the Christian who does not sin and is not even able to sin (1 John 3:9 and 5:18). Stott (1964), followed by Brown (1982), presents various solutions, including seven different approaches for the harmony of 1 John 1:8–10 versus 3:9. These proposed solutions include: (1) two different writers (of 1 John) in contradiction, (2) two different groups of adversaries with different polemics to be addressed, (3) two specific kinds of sin (for example, forgivable or unforgivable) in the author’s understanding, (4) two groups of Christians (for example, immature or mature) in the author’s understanding, (5) two modes of sinning with grammatical emphasis (for example, continual or habitual sin or not), (6) two different levels of Christians (real versus ideal), and (7) two literary contexts (for example, *kerygmatic* or apocalyptic). Further, for “sin unto death,” along with a prayer of petition (for a Christian brother’s sin) in 1 John 5:16, Brown (1982) groups various solutions into four classifications: (1) different types of petitions, (2) different types of penalties, (3) different types of sins, and (4) different types of people. As noted, these arguments or classifications are characterized by modal reasoning (with different aspects). Five points are to be noted.

First, concerning the passages of 1 John 1:8–10 and 5:16, the primary goal is for the repentance and forgiveness of the sins of Christians with two modes of prayer: (1) by one’s own prayer of confession, and (2) by other Christians’ prayers of petition (intercession). In these two modes of prayer, both prayers are addressed by and to Christians (whether their faith is real or apparent), with one purpose in mind—for God’s forgiveness of one’s personal sin. Further non-Christians (those yet to be saved) are excluded as the object-person of one’s intercessory prayer, that is, as intended for “brothers only” (1 John 5:16).

Second, concerning the passages of 1 John 1:8–10 and 2:1–2, one presumption (with the propitiation of Jesus Christ, the righteous advocate for all the sins of the entire world) is that no sin is unforgivable for those who confess in repentance and faith in Jesus Christ. This qualification of the unlimited and unconditional divine pardon should be the scope of forgiveness with respect to sin, which is also applied to the Christian’s prayer of petition for the sins of other Christians. The only sin excluded from both the confession and petition of Christians then is the sin of making God a liar (1 John 1:10; 5:10), which occurs when one refuses to believe in God (as explained in 1 John 5:10), and not believing in God’s witness about Jesus: (1) who is Christ and the son of God and who came in flesh (1 John 4:2, 9–10, 14–15; 5:10), (2) who died for our sins to save us, for God so loved the world and desired them to be saved through his son (1 John 3:16; 4:7–10), (3) who is the righteous advocate before God (1 John 2:1–2), (4) for

¹⁸ Dodd, C. H. *The Johannine Epistles*. (London: Hodder and Stoughton. 1946): 32.

all Christians who believe in him and thus to obey his commandments (1 John 2:3), (5) to hold steadfast and victorious in faith, truth, and love until his second coming (1 John 2:28), (6) as the propitiation, not only for “our” sins, but also for sins of the entire world (past, present, and future) (1 John 2:1–2), and (7) to destroy the works of Satan (1 John 3:8). Thus, those who claim to be Christians, but who still commit this “sin unto death” throughout their lives unto their death are then referred to in 1 John (1 John 2:18, 22, 26; 4:1, 3) with terms such as antichrists, liars, false prophets, and deceivers (of Christians and the world).

Third, this understanding about the sin (unto death) in 1 John is also consistent with the conviction of the Spirit of the truth (John 16:7–11), first on the sin (John 16:9) of not believing in Jesus Christ as the savior of the world (John 12:32–33; 1 John 4:14–15). The second conviction of the Holy Spirit is in regard to righteousness (John 16:10) with faith in Jesus Christ in his ascension, and thus about his physical absence here-and-now in this world, being seated at the right hand of the father as the righteous Son of God and Christ (Psalm 110:1; Matthew 22:41–46), and thereafter for the second coming of Jesus Christ (1 John 2:28) as the savior and the judge of the world. The third conviction of the Holy Spirit is about the judgment (John 16:11), that the prince of the world (Satan) has been judged (John 12:31, 1 John 3:8). Additionally, this is consistent with 1 John 2:2, for Jesus died not only for the sins of Christians to be forgiven, but also for the forgiveness of the sins of the whole world as Jesus Christ is the judge of the world (Psalm 2:9), including the root cause of the evil of this world, that is, the prince of the world (Satan) and to destroy the works of Satan (1 John 3:8).

For Christian apologetics and the defense of one’s faith, these three convictions in John 16:7–11 could be used very effectively and practically (with the messages side-by-side in 1 John). For example, the conviction is against false faith (1 John 1:1–2) for one’s salvation, as one may ask why one has to believe in the son of God (Jesus Christ), that is, why not in God (the father) and “only” in God (without the son) for one’s salvation. If one wants to obey God, the will of God is for every individual to believe in the son of God (1 John 3:16; 4:2, 9–10, 14–15; 5:10). The second conviction is against the demand for the presence of Jesus Christ on this earth, here and now, if Jesus is truly real and alive. The third conviction is against a human rationale to postpone one’s conversion until the time of one’s death (even to the last minute of one’s deathbed) as long as it takes one to believe. However, as the prince of the world, Satan is pre-judged, the entire world of sinners are now awaiting the imminent and final judgment of God at any moment (John 3:18). Furthermore, this understanding of the sin unto death, with the conviction of the Holy Spirit, is then consistent with the blasphemy against the Holy Spirit (Matthew 12:31–32). For example, both Judas (Matthew 26:14–16; John 13:21–31; John 18:5) and Peter (John 13:37; 18:16–27) betrayed Jesus. Judas regretted his actions, which led him to commit suicide (Matthew 26; Acts 1:16–20), which was against God’s will for all sinners to repent and follow Jesus Christ, whereas Peter even betrayed Jesus three times, but repented in order to follow Jesus and become his entrusted disciple (John 21:15–17).

Fourth, 1 John 3:9 declares that everyone who is “born of God” does not sin, for his seed dwells in him and he is unable to sin for he is “one born of God” (Πᾶς ὁ γεγεννημένος ἐκ τοῦ θεοῦ ἁμαρτίαν οὐ ποιεῖ, ὅτι σπέρμα αὐτοῦ ἐν αὐτῷ μένει, καὶ οὐ δύναται ἁμαρτάνειν, ὅτι ἐκ τοῦ θεοῦ γεγέννηται). Here the subject-person (1 John 3:9) is expressed as “one born of God” (ὁ γεγεννημένος ἐκ τοῦ θεοῦ). This phrase “one born of God” is reused as the reason or the basis for “one born of God,” being unable to sin. This is clearly a circular reasoning as noted. That is, “one born of God” cannot sin because of the sheer nature of being “one born of God.” This line of reasoning is circular, in order to explain one personal characteristic of being sinless or impeccable as being “one born of God” (1 John 3:9). As a case for the paradox of circularity, this circularity gives a basis from which to apply modal and nonmonotonic reasoning to examine the passages in 1 John 3:9 and 5:18 with respect to 1 John 1:8–10.

Indeed, “sin” possesses a very different meaning for a person before and after being born of God. For each sin committed before being born of God, the wage is death (Romans 6:23). Being born of God abolishes the death penalty. One being born of God is then subjective to and accountable for the personal sins he or she has committed with respect to Christian discipline, to be forgiven (1 John 1:1–10) and sinless (1 John 3:9; 5:18) through confession of the committed sin to be forgiven (1 John 1:8–10), or with petition (intercessory prayer) for the sins of others (1 John 5:16), not to sin again or to commit habitual sins (1 John 2:1), and for one’s sanctification and perfection in purity (1 John 3:3).

5.2 Other Noteworthy Circular Expressions in 1 John

A few noteworthy patterns of circularity (circular expression) exist in Johannine Literature where similar patterns

are noted in Section 2 with the selected examples. The first noteworthy circular expression is that of self-defining or self-explaining a term where a term is defined, expressed, or explained by itself. One example in 1 John 3:7 is: “whoever does righteous is righteous” (ὁ ποιῶν τὴν δικαιοσύνην δίκαιός ἐστιν). The second noteworthy circular expression is that of a phrase or a statement referring to the whole. For example, a phrase (for example, “this book” in Revelation 22:7) refers to the entire book, which contains the phrase. Another example is for a phrase of a letter to refer to the whole letter (for example, 1 John 5:13). This pattern (that is, a member of a group points to the group itself) is noted in Section 2 for the selected examples with Titus 1:12. Many times no obvious paradox or contradiction is imposed to both speaker and readers as these expressions are commonly used and understood in one’s daily lives. The third noteworthy case is found in 1 John 4:12–16 where four occurrences of “abide” in-relationship are present, and are worthy to be noted as a Johannine “flower-bouquet” of circular “abide” in-relationships.

6. Critical Method to Circular Rhetoric and Logic of Paradox

This paper has presented and explored the new paradigm of coinductive reasoning and its application to the selected literary circular-constructs found in the Bible. Many difficult classical problems associated with these examples are identified, clarified, analyzed, and explained in a sound framework of logic using coinductive, modal, and nonmonotonic reasoning. A simple diagram on a lexical, syntactic, conceptual, or semantic level is used to detect and analyze circular construct. As a result, many of the apparent confusions or contradictions inherently built into these passages are now clearly understood and resolved in a sound framework of logic. The current approach and method to handling the biblical paradox of circularity has been demonstrated to be very promising and fruitful in the study of the New Testament. In addition, a few unexpected and delightful outcomes of this study should be observed, for example, (1) the parallel between Exodus 3:14–15 and John 8:12–20, and (2) a unifying interpretive framework of the metaphorical “I am” sayings in John.

6.1 What was the Real Problem Here?

After working through many difficult and challenging cases in this paper, we should pause and reflect to ask what we may have missed in the past. These paradoxical cases are well-known to present difficult problems. After working with several problems in this paper, we now possess sufficient knowledge about these problems and their common characteristics. We have come to understandings on these problems as they are closely related and should be considered to be a class of problems dealing with circularity in paradox. Some of the key identifying characteristics in logic are circularity, modality, and nonmonotonicity. Another interesting issue is how easy it is to verify an available solution, given the problem of paradox. For example, three paradoxical problems are presented in Matthew 22:15–46, with or without their solutions.

In an attempt to set a trap for Jesus, the Pharisees and the Herodians presented the first problem (Matthew 22:15–22) to him concerning paying taxes to Caesar. In a second attempt to set a trap for Jesus, the Sadducees presented an additional problem (Matthew 22:23–33) concerning resurrection and marriage. In order to shut their mouths, Jesus presented the third problem to the Pharisees (Matthew 22:41–46) concerning the Messiah addressing David as his lord in Psalm 110.

We note several interesting points as follows. First, to assume that each problem is unsolved, and more likely unsolvable, by the contemporary Jews (notably by the Pharisees, the Herodians, and the Sadducees) at the time of Jesus is reasonable. Second, each problem is difficult, but its solution (provided by Jesus) is almost trivial, intuitive, and easily verifiable by anyone, including the Jews at that time. Third, no way exists to know how Jesus solved these problems, but a clear indication exists that Jesus possessed the solutions. Fourth, we (the contemporary biblical scholarship in the past, including the Jews at the time of Jesus) have treated each problem (with its solution if given) case-by-case (as if these problems are unrelated and mutually independent). Fifth, seemingly, we possessed no clear understanding or explanation as to how these problems are solved (for example, by Jesus) or even constructed.

Let us take another look at the paradox in Matthew 22:23–33, concerning the problem of resurrection with regard to marriage. As discussed, a vicious circle exists (in the state of being alive, dead, and to be alive again after resurrection), which meant to be linear (from being alive to being dead). Meant to be exclusive, it is mixed with the

competing legal demand of each brother in this marriage relationship (as a legitimate husband) after the resurrection, in the absence of any compromise for the exclusive legal right of each husband upon the woman.

The Sadducees, who did not believe in the resurrection, presented this controversial problem to Jesus. Most likely the Pharisees at the time of Jesus heard the same question asked many times by the Sadducees, spending many sleepless nights praying for an answer. Thus, one may wonder how the Pharisees would respond if they were challenged with the same question. The Pharisees would say that they have no idea or do not know all the details, but that they believe in God almighty who would take care of all these things. The Pharisees might have added one more comment, saying that the Sadducees should cast away their doubts and simply trust God. In reply, the Sadducees would have accused the Pharisees of their stubbornness and blind faith, questioning how one could believe that which is untrue (contradictory).

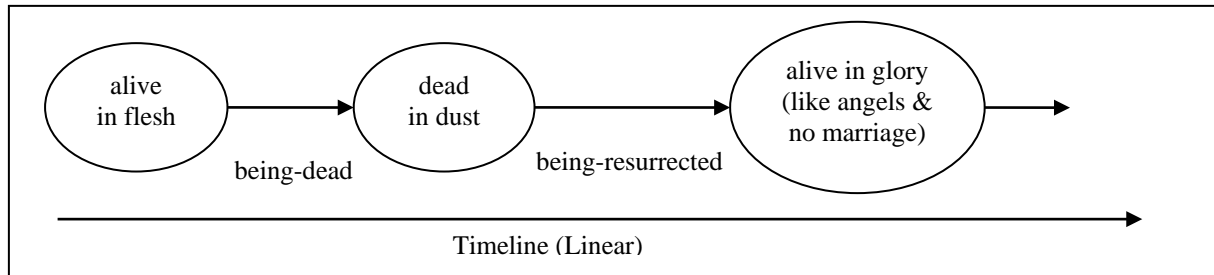


Figure 6. Life-Status (alive, dead, and resurrected) in Matthew 22:23–33

Contemporary Christians are seemingly repeating the same old *vicious circle*, in which the Pharisees preside on one side, and the Sadducees preside on the other side, with consideration being given to some of these difficult theological problems of paradox. However, once we understand the inherent nature of some of these problems, that is, paradox of circularity, we then have a good handle with which to work toward viable solutions, hopefully in a manner satisfactory to both sides. To reconstruct some of the early Christian understanding of paradox, and finally to be able to solve some of these difficult and controversial problems in biblical scholarship since Jesus and the apostles, took almost two thousand years.

6.2 A New Approach to Circular Rhetoric and Logic of Paradox

In this paper, we have developed and presented a few ways to detect or identify circularity as a potential root cause in the problem of paradox. To summarize, three ways can detect circularity as a potential cause of a paradox under investigation.

First, a simple diagram on a lexical, syntactic, conceptual, or semantic level is applied to detect a circular-construct of the passage under investigation. From this initial investigation, one may detect or relate a problem, which could be caused by or rooted in this circularity with modal and nonmonotonic reasoning. One example for this approach is the circular in-relationship of the father and the son in John 14:10 or the paradoxical examples in Matthew 22:15–46.

Second, it is to detect a real or apparent contradiction presented in the text to trigger a possibility of circular, modal, and nonmonotonic reasoning. Many of these problems are well-known and are traditionally classified as very difficult or even unsolvable problems. One example for this approach is the well-known, aged problem of sin-states versus sinless-states of Christians presented in 1 John, to detect and apply the circularity in 1 John 3:9, thus to be resolved with circular, modal, and nonmonotonic reasoning. Another noteworthy example is the conflicting statements by Jesus in John 5:31 versus John 8:16 for the validity (truth) of his own testimony. With multi-modal layers, one can easily resolve the contradiction imposed in these passages.

Third, the biblical passage presents two distinctive proofs with one including distinctively coinductive reasoning. Found in John 8:12–20, one example is the “I am” saying with two proof methods. As closely investigated, the passage presents two distinctive proof methods, which have been undermined or overlooked by the majority of past biblical scholarship. Further, this discovery of coinductive proof method by Jesus then opens up new insight, innovative breakthrough, and a novel (hermeneutical) solution to the “I am” sayings in John. This

provides fresh ground from which to understand and unify all of the metaphorical “I am” sayings of Jesus in John. In addition, it is noted that a close parallel exists between Exodus 3:14–15 (by God) and John 8:12–20 (by Jesus) with respect to two distinctive proof-methods.

As noted (for example, with Matthew 22:23–33), a (model) set of two conflicting solutions (models or interpretations) could be valid. Thus, to have two conflicting answers is not necessarily a contradiction, but rather a possibility of two valid modal solutions. Furthermore, as a word of caution, circular reasoning can be used in wrong or invalid manners. For example, if one’s assumption in an argument is invalid, then one’s entire argument is invalid— whether deduction, induction, or coinduction is used. Consider a case of a stranger demanding one to trust him “simply because he says so”. This rationale is indeed circular, but not to be taken seriously by any mature and responsible person. The scholarly tradition against modal reasoning can be retraced to Kant (1781) and to the omission of modality by Frege (1879) in his pioneering groundwork of modern logic for propositional and higher-order logic.¹⁹ For an excellent introduction to coinduction, the reader is referred to Kripke (1975) and Barwise and Moss (1996), and to Fitting and Mendelsohn (1998) for an excellent introduction to modal logic (including the brief introduction to Aristotle’s work in modal logic).²⁰

One may wonder what difference it would make with or without circular rhetoric and logic of paradox in biblical exegesis and interpretation. First, it is the first critical step to acknowledge and understand the subtle difference between the two methods in logic (induction and coinduction), and thus in one’s exegesis. Second, each method (induction or coinduction) implies its own semantics (meanings), and thus in one’s exegesis. In inductive reasoning, circularity has no meaning (nonsense), but is treated as a purely literary metaphor which has no sense (that is, nonsense), to be neglected, ignored, or deconstructed by the reader to give it new meaning (personal and subjective). Third, coinductive, modal, and nonmonotonic reasoning provide a new perspective and paradigm to biblical exegesis. In this paper, it has been demonstrated to be effective and novel in solving many difficult problems with the selected passages, and further to provide a unifying solution (in possible world semantics) to the conflicting or contradicting opinions when presented with the traditional method of biblical exegesis. Fourth, it is distinctively computational. Further, the diagramming method to detect literary circularity (which is simple and intuitive to those with some lexical or syntactic diagramming) can be implemented without additional training or learning.

Next, we will give a brief description of two methods in logic (induction and coinduction) as they have been used somewhat informally in this paper.

6.3 *A Priori* Methods in Logic

Circular rhetoric and its logic is discussed and contrasted in this paper, as a critical method in biblical exegesis and hermeneutics. As surveyed and discussed, these examples of circular rhetoric and paradoxes are found in abundance in the Bible (and in our daily lives). Along with deduction, induction, and coinduction (circular logic) are *a priori* methods in logic. Let us take another look at induction and coinduction.

Induction is a familiar term, along with inductive reasoning, inductive logic, or even inductive Bible study. Induction corresponds to well-founded structures from which a basis serves as the foundation for building more complex structures. An object constructed in inductive definition is called a “well-founded” object, for a well-founded base is present, and a set of such objects is referred to as a well-founded set. Hence, the set of natural numbers constructed by induction (starting with zero and adding one, repeatedly and finitely many times) is a well-founded set. It does not include any infinite number, because the many infinite iterations of adding one to zero will never be terminated in finite steps. Thus, minimality implies that any infinite numbers are not members of the set of

¹⁹*Immanuel Kant’s Critique of Pure Reason*. (London: Macmillan & Co.:1964), Translation by Norman Kemp Smith; *Translations from the philosophical Writings of Gottlob Frege*. (Oxford: Basil Blackwell. P. Geach and M. Black editors: 1952).

²⁰Saul A. Kripke, “Outline of a Theory of Truth,” *Journal of Philosophy* 72, no. 19 (1975): 690–716; Jon Barwise and Lawrence S. Moss, *Vicious Circles* (Stanford, CA: Center for the Study of Language and Information Lecture Notes, 2004); Melvin Fitting and Richard L. Mendelsohn, *First-Order Modal Logic*, softcover reprint of the original 1st ed. 1998 (New York: Springer, 1999).

lists of numbers that are inductively defined. This is why any circularly constructed objects are not allowed in the framework of inductive reasoning. Inductive definitions correspond to the “least fixed point interpretation” of so-called “recursive” definitions. In summary, inductive definitions possess three components: initiality, iteration, and minimality.

In contrast, coinduction eliminates the initiality condition, and replaces the minimality condition with maximality. No requirement for initiality means that no need exists for a base-case in coinductive definitions. Coinductive definitions possess two components: iteration and maximality. Any object constructed in coinductive definition is referred to as a “not-well-founded” object, because no base is present. Further iteration of coinductive definition without a base is achieved by circular construct (as an infinite loop, being applied infinitely many times). Thus, while these examples and definitions may appear to be circular (or meaningless, as it seems to be), the definition is well-formed, since coinduction corresponds to the “greatest fixed-point interpretation” to allow infinite objects. The resulting formal system of reasoning (logic) is termed as “coinduction” (in coinductive reasoning or logic), in contrast to the traditional “induction” (in inductive reasoning or logic).

One descriptive example of inductive reasoning in the Bible is found in the genealogy of Jesus Christ, which is presented generation-by-generation in Luke 3:23–38. Here is the first man (Adam) who was created by God (initiality), with a “begot” relationship generation-by-generation (iteration), and finally down to Jesus Christ in a “finite” lineage (in finite steps of “begot”), no more and no less (minimality) as anyone in the genealogy can be traced from God step-by-step in finite steps. Similarly, one descriptive example of coinductive reasoning in the Bible is found in Hebrews 7:1–3. This example is in regard to Melchizedek who is described as: (1) without father or mother, without genealogy, without beginning of days (that is, no initiality), (2) without end of life (maximality), and (3) being a priest (that is, iteration, of a priestly ministry year-by-year) forever. The “be-like” relationships (Hebrews 7:3, 15) should be identified as the key circular construct connecting Melchizedek and the Son of God.

6.4 A Semantic Difference with Circular Logic

As surveyed in this paper, the presence and usage of circular rhetoric and paradox is pervasive and persistent throughout the Bible, but what difference does it make or how significant is it in exegesis or hermeneutics? Has circular rhetoric and paradox been handled in one way or another with the conventional paradigm of language, metaphor, exegesis, hermeneutics, semantics, or logic in biblical studies? This is not so intuitive and is very difficult to answer for those who are not trained in circular rhetoric and logic.

To cast some insight, let us consider the famous riddle of the chicken (hen or bird) or the egg first. The story begins with three facts: (1) a chicken comes out of an egg, (2) an egg comes out of a chicken, and (3) the reproductive cycle between chicken and egg goes on forever. The question then becomes, which one would be first: the chicken or the egg?

Trying one option or the other, one may soon realize that none of the choices could be an answer. If one says the egg, then the other may use a counter-argument challenging where that egg came from except from the chicken. On the other hand, if one says the chicken is the answer, then the other may provide again a counter-argument challenging the origin of the chicken. After several trials and errors, one would finally figure out there is no way to escape this vicious circle, would conclude that no answer exists, and would discard this entire question as invalid or nonsensical. This is exactly what the conventional logic (of the language and its paradigm based on induction) could say at best. The logic is based on induction (inductive reasoning) where all things are based on what is finite, no matter how close to infinity. This type of logic and paradigm of language does not allow what is infinite. Even though one may express what is infinite or eternal, the expression has no meaning or is nonsensical in this frame of logic or paradigm. That is, one may have an expression in syntax for infinite or circular object, possibly using circular rhetoric, but it has no meaning in semantics.

One may extend one’s language to allow not only to express what is infinite (for example, through circular rhetoric), but also its meaning of what is infinite. For example, let us consider the problem of the chicken versus the egg. When one says the answer is the chicken, the other may challenge with the counter-argument of where the chicken came into being without an egg, to conclude that it should be an egg. However, one may continue one’s defense to say in reply that that the egg also came from a chicken. Thus, one’s answer of the chicken is still defensible and true (until it is proven to be false). After a few rounds of this, one does not stop or yield, but rather

continues on this vicious circle of argument forever, defending oneself forever. That is, rather than being false, the answer of the chicken would be true forever. Likewise, the other answer is the egg. Allowing what is not only circular rhetoric (in syntax) but also its meaning (in semantic), we now have two answers: (1) one for the chicken, and (2) the other for the egg.

This “chicken-or-egg” type of problem is very close in its pattern to the paradox in Matthew 22:15-23 (to pay tax to Caesar or not). No matter whether one says yes or no, it ends in a logical dilemma and deadlock. Once the infinite is allowed, then the problem has a valid solution, which is a model-set of two contradicting answers (what is Caesar’s to Caesar and what is God’s to God).

6.5 “Already and Not Yet” in *Salvation History*

One misleading view associated with induction and its minimality is a tendency for a “one-and-only-one” best interpretation or valid model. The reflection of this misconception in biblical scholarship is the pervasive and persistent tendency toward one best interpretation in contemporary biblical exegesis. Allowing the *possible world* semantics, it is possible to justify an array of valid interpretations in exegesis where some valid interpretations could be even in conflict with (contradictory toward) some other valid interpretations. For example, when Jesus was faced with the question of whether one should pay taxes to Caesar, his solution is a model-set consisting of two contradicting solutions (Matthew 22:21). At first glance, the decision problem (demanding yes for yes or no for no) seems so simple and innocent. However, the difficulty and its scope turn out to be so immense and deep—not only in a political dimension, but also in a theological dimension. Clearly, each solution may be viewed as tautological, expressed in circular rhetoric, and combined as a model-set of two contradicting solutions, in order to present not a partial, but rather a complete two-fold solution (of what is God’s versus what is not God’s).

A classic example in contemporary New Testament scholarship with pioneering and successful application of temporal-modal logic is found in the works of Cullmann.²¹ In the framework of *Salvation History* (*Heilsgeschichte*), the two-stage coming of the Kingdom of God (Luke 17:20–30) is expressed in temporal-modal logic of “already” and “not yet” in tension.

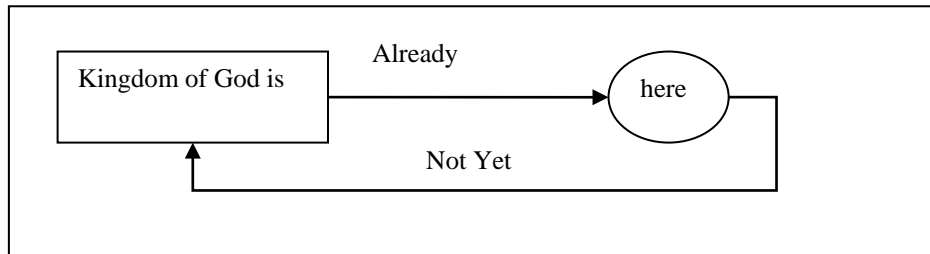


Figure 7. Two-stage coming of the Kingdom of God “already” and “Not Yet” in circular rhetoric

To uncover the underlying critical method in temporal-modal logic, and to be recognized correctly and appreciated rightfully, took over a half-century. Further, it is based on circular rhetoric built in temporal-modal aspect of the two-stage coming of the Kingdom of God, in order to generate a temporal tension of “already” and “not yet.” As Cullmann noted in *Christ and Time*, some critical and exegetical premises in this framework are summarized as: (1) “the linear conception of time in the revelatory history of the Bible,” (2) “God’s Lordship over time,” (3) “Christ event at the mid-point” in the redemptive history of the past, the present, and the future stages, and (4) the “complete Lordship of Christ and the redemptive process.” The representative paradox in tension is deeply associated in the person of the Christ who was already preexisting in the beginning (divine), and yet to be born and come as a man (human). This paradox in temporal-modal logic is constructed and expressed effectively with circular rhetoric in Matthew 22:41–46 with Psalm 110:1.

The similar rhetoric of “already” and “not yet” is found in the dawn of early Christianity. In a public testimony (John 1:19–23), John the Baptist testifies himself as the forerunner of the coming Christ (Isaiah 40:3). At

²¹ Oscar Cullmann, *Christ and Time* (London: Gordon Pr Publishing, 1962); and Oscar Cullmann, *Salvation in History* (London: SCM-Canterbury Press, 1967).

this time, Christ is not yet revealed in public, but is to be identified later by John the Baptist through his baptism with the sign of the Holy Spirit (John 1:26–34). John the Baptist’s unique description about the coming Christ with respect to himself is found in John 1:15 (ὁ ὀπίσω μου ἐρχόμενος ἔμπροσθέν μου γέγονεν, ὅτι πρῶτός μου ἦν), and again in John 1:30 (ὀπίσω μου ἔρχεται ἀνὴρ ὃς ἔμπροσθέν μου γέγονεν, ὅτι πρῶτός μου ἦν). The passage is composed of three simple and distinctive prepositional phrases, in either temporal or spatial meaning, to generate an interesting enigma and paradox in exegesis.²²

The first prepositional phrase (ὀπίσω μου ἐρχόμενος) can be viewed as either temporal (“who comes after me” in a before-after relationship) or spatial (“who comes after me” in rank or “who follows me” in a teacher-disciple relationship).²³ The second phrase (ἔμπροσθέν μου γέγονεν) can be also viewed as either temporal (“has been before me” in timeline) or spatial (“has surpassed me” or “has been superior to me” in rank or superiority).²⁴ The third clause (πρῶτός μου ἦν) is viewed either as temporal in a relative or comparative sense (“was earlier than I” in time) or as temporal in an absolute temporal sense (“was before me” from the beginning of John 1:1).²⁵ For a note, an exegetical choice to take both the second and the third as temporal would mean that “he was before me because he was before me.” This is clearly in circular rhetoric. For this reason, a careful exegetical elaboration has been noted in the past in order to avoid the passage from being simply tautological (or circular). Proposed by Cullmann, one alternative is to place or qualify its temporal point of the Christ in the third clause (πρῶτός μου ἦν) to the beginning in John 1:1.²⁶ However, the same or similar circular rhetoric should be noted with the second clause and the third clause either in a spatial sense (in rank) or a temporal sense (in time). Further, a similar caution should be applied to the first clause (with the second or the third clause) as they are also in circular rhetoric generating a paradox in rank or in time. That is, he “who comes after me has been before me” in rank or in time.

The follow figure (Figure 8) provides an illustration and insight about the reciprocal “is-before” relationship between two objects in circular rhetoric.

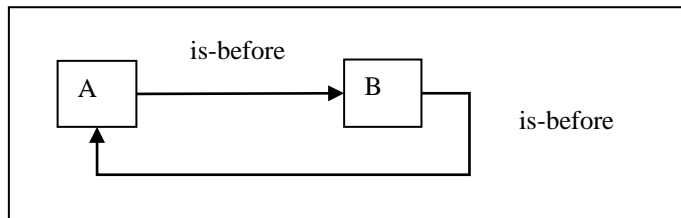


Figure 8. “A is before B” and “B is before A” (or “A is after B”) in circular rhetoric

7. A New Interpretive Paradigm for Melchizedek in Hebrews 7

Albeit difficult to understand, Hebrews is another literary treasure and masterpiece with noteworthy

²² Herman N. Ridderbos, *The Gospel According to John: A Theological Commentary*, trans. John Vriend (Grand Rapids, MI: William B. Eerdmans Publishing Co., 1997), 55; and John F. McHugh, *Critical and Exegetical Commentary on John 1–4*, ed. Graham N. Stanton (London; New York: T. & T. Clark, 2009), 61–63; 63, fn. 39. McHugh notes (from ἔμπροσθέν, BAGD 257) Cullmann’s view of ἔμπροσθέν μου to treat this clause as the absolute time in John 1:1 (*Coniectanea Neotestamentica* 11 [1947: Fridrichsen Festschrift], 26–32), and to avoid the following clause “ὅτι πρῶτός μου ἦν,” to give simply the reason for it (simply being a tautology or a circular logic) where this point is also noted in Oscar Cullmann, *The Early Church* (London: SCM Press, 1956) 180–81; and J. Ramsey Michaels, *The Gospel of John* (Grand Rapids, MI: William B. Eerdmans Publishing Co., 2010) 83–87.

²³ John McHugh, *A Critical and Exegetical Commentary on John 1–4* (New York: T. & T. Clark 2009), 62; “ὀπίσω,” by H. Seesemann in Kittel, TWNT, VI, 289-92; “ὀπίσω,” in BAGD, 575 [2 b; 2 a (β)]; and Michaels, *Gospel of John*, 86, fn. 50.

²⁴ McHugh, *Critical and Exegetical Commentary on John 1–4*, 63; and “ἔμπροσθέν” with genitive in BAGD 257 [2 f] of rank.

²⁵ McHugh, *Critical and Exegetical Commentary on John 1–4*, 63; “πρῶτός” with genitive in BAGD 725–26 [1 a] of time “first, earlier”; [1 c (β)] of rank; and “πρῶτός,” in Kittel, TWNT, V 865–68.

²⁶ Cullmann, *Early Church*, 180–81.

circular rhetoric and paradoxes. The author of Hebrews is aware not only of the difficulty of his materials in teaching, but also the level of his readers in learning (Hebrews 5:10–14). He points out clearly that they should have been competent teachers by now, but rather are still slow to learn, and he compared their stage of learning to that of an infant. Expressed on behalf of the community (of “we”), the author’s pedagogical assessment is not only a personal opinion, but also a communal consensus. In order to effect spiritual awakening and introspection, he directly and authoritatively addressed his concern to his readers, even at the risk of embarrassing them (Hebrews 5:11–14). However, just as any good teacher might do, the author takes his time and space for his students to review the basic materials in order that they will be prepared (Hebrews 6:1–20). After a lengthy pedagogical digression (Hebrews 5:10–6:20), the author then returns to the main course of discussion in Hebrews 7.

7.1 The Difficult Lesson Regarding Melchizedek

The difficult lesson with which the author is so eager engage is in regard to Jesus who is the high priest forever in the order of Melchizedek (Ἰησοῦς, κατὰ τὴν τάξιν Μελχισέδεκ ἀρχιερεὺς γενόμενος εἰς τὸν αἰῶνα in Hebrews 6:20; 8:1). The key thesis in progression is centered in the correct understanding of this key passage in Psalm 110:4. The Son of God is both divine and human, preexistent and yet to be born as a man to be the priest according to the order of Melchizedek (Psalm 110:1, 4; Hebrews 7:3, 15). This priesthood is ordained by the oath of God, sworn by himself in an act of self-reference, for no higher authority exists whereby to swear (Hebrews 6:13; 7:21). According to the Scripture, as it is written as in due time, the Son of God has come to fulfill what had been written about himself to do the will of God (Psalm 40:6–8; Hebrews 10:5–9). Here the Son is reading the scroll, which was written to speak about him. This is one remarkable and mysterious example of circular reasoning and literary construct, noteworthy in biblical prophecy and logic. The Son is not only the high priest of God, but also the sacrifice himself with his own body (or blood) in circularity, once for all to set aside the first to establish the second (Hebrews 10:8–10). This is another remarkable and mysterious example of circular and literary wonder and mystery of the Son of God.

In order for the audience to be alert prepared (Hebrews 5:11–6:12), Hebrews 1–6 is building up the majestic exposition toward this climactic theme for the revelation of the high priesthood and sacrifice of Jesus Christ in Hebrews 7–9. By the time of Hebrews 7:1, the audience is well-prepared and alert spiritually. Additionally, they are now familiar with the key phrase, “according to the order of Melchizedek” with regard to the eternal high priesthood of Jesus Christ. Hebrews 7:1–3 is a passage somewhat like a handle to the divine scroll yet to be unrolled to reveal the hidden mystery of the Son of God regarding his high-priesthood. The majestic exposition in Hebrews 7–9 settles the mind-boggling and difficult theological controversies and challenges. The discussion begins with Melchizedek in Hebrews 7:1–3. He is the king of Salem and the priest of God Most High in Genesis 14:18–20, superior to Abraham and all of his descendants including Levi. Here Melchizedek is presented and interpretively applied to the Son of God in the continuing framework of King-Priest Christology (Psalm 110:1, 4).

7.2 Melchizedek in Hebrews 7:3 and 7:15

In Hebrews 7:3, Melchizedek is presented and to be understood as the one “without father, without mother, without genealogy, without beginning of days or end of life.” Recent “Hebrews” scholars have been engaged in a heated and controversial discussion over this one critical passage. The major and critical issue in the debate is: (1) whether Melchizedek is either divine or human (or supra-human), or (2) whether the passage is being influenced by Jewish or Hellenistic tradition. Each scholarly opinion seems in contention with each other, with its own strong and substantial basis and supporting evidences to their own position against others. The author refers the reader to many excellent and recent surveys on the passage and the related debate and discussions.²⁷ Here, the text itself rhetorically presents a strong and continuing impression about Melchizedek who (or whose priesthood) seems eternal and mysterious.

²⁷ Harold W. Attridge, *The Epistle to the Hebrews: a Commentary on the Epistle to the Hebrews*, Hermeneia – a Critical and Historical Commentary on the Bible (Philadelphia: Fortress Press, 1989) 186–195; Craig R. Koester, *Hebrews: a New Translation with Introduction and Commentary*, 1st ed, The Anchor Bible v. 36 (New York: Doubleday, 2001) 24–42, 338–350; Gareth Cockerill, *The Epistle to the Hebrews* (Eerdmans, 2012) 338–350; Paul Ellingworth, *The Epistle to the Hebrews* (Eerdmans, 1993) 349–360; William L. Lane, *Hebrews 1-8*, vol. 47A, Word Biblical Commentary (Word Books, 1991) 163–165.

Continuing and even elevating this rhetorical thrust still in Hebrews 7:3, Melchizedek is said to be (made) “like” (ἄφομοιωμένος) or to resemble the Son of God as he remains a priest forever.²⁸ Furthermore, the Son of God is the other priest “like” or “to the likeness of” Melchizedek (κατὰ τὴν ὁμοιότητα Μελχισέδεκ) in Hebrews 7:15, and in the priestly order of Melchizedek (κατὰ τὴν τάξιν Μελχισέδεκ) in Hebrews 7:17.²⁹ Thus, this “be-like” relationship in its full cycle connects these two historical figures in a vicious circle. After the introduction in Hebrews 7:1–3, the following arguments and exegesis in Hebrews 7 present Melchizedek as the type and basis of the priesthood, apart from the priestly order of Aaronic lineage, ultimately established and fulfilled by the coming Christ (Hebrews 7:4–28; Psalm 110:1,4). Hebrews 8:1 is the majestic conclusion of the preparatory and foundational argument in Hebrews 7. It serves as the basis and opening statement of the following main thesis of this letter: now we do have this high priest who is the Son of God (Psalm 110:1, 4), who is already seated in his seat at the right hand of God, who is currently engaged in his full ministry for all the believers, and who is superior and perfect in all aspects (Hebrews 8:6).

7.3 The Son of God in the Order of Melchizedek

A few distinctive and significant characteristics of Melchizedek in Hebrews 7 further shed light on a deeper understanding on the Son of God and his superiority. First, it is the priestly superiority of Melchizedek over Abraham and all of his descendants, including Levi and the Levite priests. This is clearly evidenced by two facts in Genesis 14:18–20 and further elaborated in Hebrews 7:4–10. As the priest of God most high, Melchizedek blessed Abraham, and Abraham gave Melchizedek a tithe of all in due respect. Second, it is the priestly perfection (of the Son of God, according to the order of Melchizedek) independent of and in contrast with the priestly order of Aaron (Hebrews 7:11–19). Pointedly being asked and challenged in Hebrews 7:11, why a need existed or the necessity to dismantle the order of Aaronic priesthood, to be replaced by the other priest according to the order of Melchizedek? The answer is yes, as the change in priesthood occurred through the perfect priest and his perfect sacrifice (Hebrews 7:27; 4:15–16; 10:9–14). Further this event brought about the change in the law because of the perfection in the eternal priesthood and the atoning sacrifice of the Son of God. Third, it is the oath by God, made and fulfilled in Jesus to be the priest forever, according to the order of Melchizedek, and to be the guarantee of the new covenant (Psalm 110:4; Hebrews 7:20–22). Fourth, it is the eternal priesthood of the Son of God who is the savior and interceder for all believers forever (Hebrews 7:23–25). In a summary and commencement, the Son of God, the high priest of all believers, is perfect and necessary for all believers (Hebrews 7:26–28). He is holy, blameless, pure, and set apart from the sinners, exalted above the heavens.

The description of Melchizedek in Hebrews 7:3 fits so well within the rhetorical framework of the coinduction of what is forever: (1) without father or mother, without genealogy, without beginning of days (that is, no initiality), (2) without end of life (that is, maximality), and (3) being a priest forever (that is, iteration, of a priestly ministry year-by-year and never-ending). The description of “without father or mother, without genealogy” may fit well to the framework of the “human” Melchizedek for the absence of any written historical record about Melchizedek from the contemporary perspective. However, it does not fit nicely for the human Christ, who had an earthly father and mother, and a genealogy revealing his birth as the son of David. For the “divine” Melchizedek, the clearly stated restriction of being a human being to be a priest seems to be a major obstacle to overcome (Hebrews 5:1–3). Further, Melchizedek—as a human being who was destined to die, but like Abraham in this regard (cf. Galatians 3:11–12; Hebrews 11:2), received the witness that he lives in contrast to the Levite priests who received tithes—died (καὶ ὁδε μὲν δεκάτας ἀποθνήσκοντες ἄνθρωποι λαμβάνουσιν, ἐκεῖ δὲ μαρτυρούμενος ὅτι ζῆ), as argued in Hebrews 7:8.

7.4 Two Paradoxes of the Son of God in Psalm 110

Truly, as warned by the author of Hebrews, two passages in Psalm 110 generate the enormous controversies and difficulties in New Testament study and exegesis.³⁰ The first controversy and paradox about the

²⁸ Koester 347–350; Cockerill 298–306; Ellingworth 269; Lane 165; ἄφομοίω TDNT 5.198.

²⁹ Attridge 192–195, 202; Ellingworth 378; Kobelski 118; Cockerill 314, 321; Koester 355; Lane 183; ὁμοιότης TDNT 5.189–190; τάξις BDAG, 989, 3–4.

³⁰ Oscar Cullmann, *The Christology of the New Testament* (rev. ed.; New Testament Library; Philadelphia: Westminster, 1964), 83–89.

Son of God is the problem of the lordship of Christ. He is the son of David. Yet he is being addressed by David as “my lord” (Psalm 110:1). The paradox deals with the extended human “father-son” relationship in the law, with the divine-human relationship (of lord-servant). This divine lordship of the Son of God is professed by David who is the very author of this psalm and the father of the son of David. All synoptic gospels deal with the passage (Psalm 110:1) as having great significance (Matthew 21:41–44; Mark 12:35–37; Luke 20:41–44). A circular construct is noted as to the cause of the paradox and controversy. Once the circularity and its constituent links are understood, the confusion and contradiction then disappear.

The second controversy and paradox of the Son of God in Psalm 110:4 is the problem of the priesthood of the Son of God who is from the tribe of Judah (Hebrews 7:14–15). According to the law, to have a priest outside of the tribe of Levi and according to the order of Aaronic lineage is impossible. The legal question is how it could be possible for Christ, the son of David, to be a priest of God. This controversy has never been dealt with or resolved in any part of the New Testament except in Hebrews. As discussed, the writer has engaged in lengthy and delicate discussions with great care and thorough discussion; otherwise, he could easily mislead his audience. A careful lexical analysis has revealed a circular construct built around the “be-like” relationship between Melchizedek and the Son of God (Hebrews 7:3, 15). This circularity is the underlying core concept of understanding of the key phrase: “according to the order of Melchizedek.” Again, as shown in this example, the circular relationship is clear or vivid at a syntactic level, but rather requires a careful lexical analysis to check for each rendering word (*κατὰ τὴν τάξιν, ἄφωμοιωμένος, and κατὰ τὴν ὁμοιότητα Μελχισέδεκ*).

8. Conclusion

Selected examples of biblical paradoxes of circularity in the Bible and “I am” sayings in John have been investigated to shed new insight on the paradoxes of circularity presented in this paper. The new perspective and paradigm of circular (coinductive) reasoning and its application to biblical texts are presented and analyzed. Various literary structures in paradoxical circularity have been noted and analyzed. These circular patterns include: (1) one concept in self-referencing (e.g., “I am who I am” in Exodus 3:14), (2) two concepts in mutual-referencing (e.g., “I am in the father and the father is in me” in John 14:10), (3) many concepts in a cycle with a directed relationship (e.g., lord-servant relationship, from David to his descendants, including Christ, back to David in Matthew 22:41–46), and (4) one concept as an element, referring to a set or a group of which the concept is a member (e.g., “all Cretans are always liars” by a Cretan prophet, in Titus 1:12).

Two proof methods in John 8:12–20 are examined and compared. This provides a clear case of both lawful (inductive) reasoning based on the Law and circular (coinductive) reasoning, which is based on divine self-testimony being used as proof methods in the Bible. The discovery and presence of circular reasoning in John 8:12–20 offers a concrete basis for a new critical method in New Testament study and a new interpretive paradigm for Jesus’ “I am” sayings in John. Furthermore, it is noted that Jesus’ “I am” sayings in John 10:1–39 are used to identify the true identity of the gate and the good shepherd in the metaphoric story found in John 10:1–5. With this understanding, it is noted that each of Jesus’ metaphorical “I am” sayings in John functions as (self-identifying) interpretive keys to the true identity of the central symbolic figure, as each story unfolds and blends with what is real and what is symbolic, and thus reveals the true meaning of the parable (that is, its hidden and intended message). This new insight provides a unified framework of interpretation to the understanding of some of the very difficult sayings of Jesus in John (e.g., “eat my flesh” and “drink my blood” in John 6). Further, the difficult passage and paradox of 1 John is discussed. It is about the sin and sinless states of the believers. The paradoxical dual-reality of the believers has been discussed and resolved with circular reasoning. Finally, the difficult lesson in Hebrews on Psalm 110:4 has been analyzed and noted for circular “be-like” relationship (Hebrews 7:3, 15).

The approach of this paper is distinctively computational, in order to explore a new critical method toward computational literary criticism in biblical study as selected examples of the paradoxes of circularity are surveyed and analyzed. Distinctive and inherent characteristics of circularity, modality, and non-monotonicity are noted with the selected paradoxes. By no means is the scope of this paper complete or comprehensive; rather, further investigation and study are called for in the future. However, the current study does demonstrate a promising new perspective and novel approach, along with some groundbreaking results to solve many classical and difficult problems dealing with the biblical paradoxes of circularity. The writer’s hope is to bring renewed interest, understanding, and excitement toward the study of biblical paradox in the twenty-first century.

Appendix A: A Computational Model for Circular Rhetoric and Logic of Paradox

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Coinductive logic has been used in many contemporary systems which require 24x7 operations for an infinite process designed to run forever. Some of these exemplar systems include: web server, wireless mobile telecommunication system, 24x7 life-support system in hospitals, GPS satellite systems for navigation, computer operating systems, network systems, and so on. These systems are designed to run forever without an end once they are up and running. The process of these systems is characterized as an infinite loop or cycle. First, we present a brief informal introduction to a logic-based programming language and its extension to coinductive logic. The reader is referred to Lloyd (1987) for logic programming, Simon *et al* (2006) for coinductive logic programming (co-LP), Min and Gupta (2009) for co-LP with negation, for a detailed account.

Logic (or logic-based) programming language was first proposed by McCarthy (1959). The proposal was to use logic to represent declarative knowledge to be processed by an automated theorem prover. The major breakthrough and progress in automated theorem proving for first order logic is marked by *resolution principle* by Robinson (1965) along with its subsequent developments. In 1972, the fundamental idea that “logic can be used as a programming language” is conceived by Kowalski and Colmerauer (Lloyd, 1987), with the proposal of logic programming language (Kowalski, 1974) and the implementation of Prolog (PROgramming in LOGic) interpreter by Colmerauer and his students in 1972 (Colmerauer and Roussel, 1996). We term this type of logic programming as traditional (or “inductive”) *logic programming* (LP) for its basis of “induction” as a proof method, in contrast to *coinductive logic programming* (co-LP) due to its extension with “coinduction”, following the terminology of Simon (2006).

A logic program consists of rules (called *Horn’s clauses*) of the form:

$$A_0 \leftarrow B_1, \dots, B_m, \text{not } B_{m+1}, \dots, \text{not } B_n.$$

for some $n \geq 0$ where A_0, B_1, \dots, B_n are called *atoms* (or *predicates*), A_0 is called the *head* (or *conclusion*) of rule (4.1), and B_1, \dots, B_n is called the *body* (or *premises*) of rule (4.1). The body is the conjunction of atoms B_1, \dots, B_n where each atom is separated by a comma corresponding to the logical operator “ \wedge ” (that is, “and”). Each clause is terminated by a period and the connective “ \leftarrow ” between the head and the body is corresponding to the logical operator of implication (that is, “if”). For a convenience of our notation, we also use “ $:-$ ” with “ \leftarrow ” interchangeably. A rule without a body is called a *fact* (or a *unit clause*) (for example, $\{ A_0. \}$). One may view a program as a theory (of a formal system) with a semantics assigning a collection of sets (or models where each model is a valid interpretation, and referred to as a solution of the program) to a theory.

For example, consider a parent relationship, $\text{parent}(X, Y)$ where it means “X is a parent of Y”. For example, the parent (“begot”) relations of Genesis 5:3-9 can be represented as the following facts.

<pre>parent(adam, seth). parent(seth, enosh). parent(enoth, kenan). parent(kenan, mahalalel).</pre>

Table 1. parent program in Genesis 5:3-9

Next, let’s consider an ancestor relationship, $\text{ancestor}(X, Y)$, where X is an ancestor of Y. Then the ancestor relationship can be defined as two rules: (1) a parent X of Y is an ancestor X of Y, and (2) an ancestor X of Y is a parent of X of Z where Z is an ancestor of Y, as follows.

<pre>ancestor(X, Y) :- parent(X, Y). ancestor(X, Y) :- parent(X, Z), ancestor(Z, Y).</pre>
--

Table 2. ancestor program

The “ancestor” relations are inductive, not coinductive (circular). If a circular definition of “ancestor” is allowed, then it would be invalid (nonsense). The query to this knowledgebase (combining parent program and ancestor program) is expressed as “:- p” where p is a predicate (or a sequence of predicates such as “:- p, q, r, ...”). For example, a query of “:- parent(adam, seth)” will be true as there is a fact, “parent(adam, seth)” found in Table 1. Another query of “:- parent(adam, cain)” would result in a failure (to be false) for there is no fact or rule to satisfy the current query in the current knowledgebase of the “parent and ancestor” program in Table 1 and Table 2. This says something about the knowledgebase (of the facts and the rules) with respect to a “closed-world” semantics (in contrast to a “possible-world” semantics to allow “the possibility of something that one does not know”).

The query of “parent(adam, cain)” results in a failure (that is, false). This is equivalent to say that a negation of “parent(adam, cain)” is true, with respect to the current knowledgebase based on Genesis 5:3-9. One may note that this type of negation is “negation by failure”. However, “parent(adam, cain)” is true if one may expand the current knowledgebase to those facts in Genesis 4. In fact, one may add many more parent-facts from Genesis 4: “parent(adam, cain)”, “parent(adam, abel)”, “parent(eve, cain)”, “parent(eve, abel)”, and so on.

Next, consider the query of “parent(adam, X)” where X is a variable to be instantiated with a constant if there is any matching fact to accommodate this query. This query will be true as there is a fact of “parent(adam, seth)” where X is instantiated by “seth”. Further the query of “parent(eve, seth)” will be failed (“false”, that is, “not true”) because the current knowledge of the parent program does not warrant this fact. From this, one should notice that the known world of the parent program is restricted by the “closed-world assumption” (CWA). That is, “the things that I do not know” means “the truth value of these things are false”.

Further the query of “ancestor(adam, enosh)” is true for “ancestor(adam, enosh)” will be replaced by the second rule of ancestor, “ancestor(X,Y) :- parent(X, Z), ancestor(Z,Y)” with X for “adam”, Y for “enosh”, and Z for “seth”, resulting in the next goal of “ancestor(seth, Y)” to be resolved. Next, “ancestor(seth, Y)” will be resolved by the first rule of ancestor program, “ancestor(X, Y) :- parent(X,Y)” with the current goal of “ancestor(seth, Y)” where current X of the head will be replaced by “seth” and current Y will be replaced by “enosh”, resulting in a successful inference to be well-founded.

Extending the traditional LP, one may declare a coinductive predicate. For example, consider the following program with a coinductive predicate “i_am” with the following coinductive definition.

```
i_am :- i_am.
```

Table 3. i_am program with a coinductive predicate “i_am”.

This program seems to capture and represent the circular construct and meaning of “I am who I am” in Exod. 3:14, even though the predicate “i_am” is somewhat simplified and seems in need of further refinement. Note that “i_am” is a coinductive predicate; otherwise, the computational evaluation (execution) of “i_am” results in an infinite loop. Moreover, this program can be refined with a coinductive predicate “who(X)” to represent “who is X” where “X” is “i_am” as follow.

```
i_am :- who(i_am).
who(i_am) :- i_am.
```

Table 4. i_am 1 program: the revised i_am program with two coinductive predicates for “i_am” who “i_am”.

Moreover, the predicate “i_am” is propositional, to be further refined by making the coinductive predicate “i_am” with “i_am(X)” to be predicated, that is, in First-order logic, as follows.

```
i_am(X) :- who(i_am(X)).
who(i_am(X)) :- i_am(X).
```

Table 5. i_am 2 program: another revised coinductive predicates for “i_am” who “i_am”.

Thus one may further qualify the variable X to be a certain person (for example, “Jesus Christ”) for an instance of X in “i_am(X)”. Next we consider the “in” relationship of the son and the father, in John 14:10, as follow.

```
in(the_son, the_father).
in(the_father, the_son).
in(X, Y) :- in(Y, X).
```

Table 4. in(X,Y) program with a coinductive Predicate “in(X, Y)”

With negation “not”, one may express the friend and enemy relations with the following coinductive definitions.

```
friend(X, Y) :- not enemy(X, Y).
enemy(X, Y) :- not friend(X, Y).
```

Table 5. friend-enemy program, with two coinductive predicates friend(X,Y) and enemy(X,Y).

The coinductive predicate “friend(X, Y)” means that X is a friend of Y, and enemy(X, Y) means that X is an enemy of Y. One may extend the friend-enemy program by adding a few facts, as follows.

```
friend(X, Y) :- not enemy(X, Y).
enemy(X, Y) :- not friend(X, Y).
friend(ester, mordecai).
enemy(ester, haman).
friend(ester, xerxes).
```

Table 6. friend-enemy program with a few facts.

Three facts of friend or enemy are added to the program. Based on the fact of “friend(ester, mordecai)” alone, it is known (in this theory) that “ester” is a friend of “mordecai”. However, whether “mordecai” is a friend of “ester” is not known for there is no known fact or rule of inference to deduce this fact. Thus one may add two more rules of friendship so that friendship is commutative and transitive, as follows.

```
friend(X, Y) :- not enemy(X, Y).
enemy(X, Y) :- not friend(X, Y).
friend(X,Y) :- friend(Y,X).
friend(X,Y) :- friend(X, Z), Y is not = Z, friend(Z, Y).
friend(ester, mordecai).
enemy(ester, haman).
friend(ester, xerxes).
```

Table 7. friend-enemy program with a few facts.

From this program (theory), one may deduce that “ester” is a friend of “mordecai” and vice versa, based on the rule of “friend(X,Y) :- friend(Y,X)”, and that (1) “ester” is a friend of “mordecai”, (2) “mordecai” is a friend of “xerxes”, and thus (3) “ester” is a friend of “xerxes” based on (1) and (2) with the transitive rule of “friend(X,Y) :- friend(X, Z), Y is not = Z, friend(Z, Y)”. Moreover, one may assert (1) that “ester” is an enemy of “haman”, (2) that “ester” is not a friend of “haman”, and so on. One may try the “love-hate” relationship similar to “friend-enemy” relationship. Next we present the following four examples to illustrate some of the important features and characteristics of co-LP.

Example 1. Consider the first program NP1 with one coinductive predicate of “p”.

NP1: p :- p.

Each query of “p” and “not p” succeed with the program NP1. The program NP1 has two models. One model holds for “p” and the other model holds for “not p”. That is, “p” is true in the first model whereas nothing is true in the second model (that is, “not p” is true). This type of the behavior seems to be confusing (seemingly contradictory) and thus counter-intuitive. However, as noted earlier, this type of behavior is indeed advantageous as we extend traditional LP into the realm of modal reasoning. Clearly, the addition of a circular clause (e.g., “p :- p.” as in the program NP1) to a program extends each of its initial models into two models where one includes “p” and the other does not include “p” (that is, “not p”). Further, co-LP enforces the consistency of the query result causing the query of “p and not p” to fail. However, the query of “p or not p” will succeed (in fact, there are two models: one for “p” and the other for “not p”).

Example 2. Consider the second program NP2 with two coinductive predicates “p” and “q”.

NP2: p :- not q.
 q :- not p.

Each query of “p” and “q” succeeds with the program NP2. In fact, the program NP2 has two models where one model holds for “p” and “not q”, and the other model holds for “not p” and “q”. Further they are mutually exclusive to each other. That is, they are not consistent with each other. Thus the query “p” is true with the first model of “p” and false with the second model of “q” while the query “not p” is true with the second model of “q” but not true with the first model of “p”. The results of these two queries are “seemingly” contradictory, if conjoined carelessly. Thus one should be careful not to join these results as one query holds with one model but not with the other model. Computing with the “possible world” semantics in presence of negation can be troublesome and seemingly lead to contradictions, similar to the first program NP1. Moreover, the query of “p and not p” will never succeed if we are aware of the context (of a particular model) because there is no model that holds for both “p” and “not p”.

Example 3. Consider the following program NP3 with one coinductive predicate “p”.

NP3: p :- not p.

The program NP3 has no model, in contrast to the program NP1 which has two models. Further, the query of “p or not p” provides a validation test for NP3 with respect to the predicate “p” whether the program NP3 is consistent or not.

Example 4. Consider the following program NP4 with the two coinductive predicates “p” and “q”.

NP4: p :- not q.

The program NP4 has a model of “p” whereas the program NP1 has two models of “p” and “q” as we noted earlier. Further the program NP4 has a definition of “p” (that is, p is defined as the left-hand of the rule with its body) but not for “q”, whereas the program NP2 has the definition for “p” and “q”. The query of “p” succeeds with the program NP2 and NP4 whereas the query of “q” succeeds with the program NP1 but not with the program NP4. To put it simply, we have some facts and rules defined for “p” and “q” in the program NP2. But only “p” is defined in the program NP4. That is, there is nothing known about “q” in NP4, except through “p”. In a “closed-world” semantics, “q” is “not true (that is, false)” with the program NP4 for “q” not defined (not known). This is an example of “negation as failure” with closed-world assumption (CWA) as noted earlier.

To summarize, co-LP is a recent and first attempt to implement coinductive reasoning as a formal programming language. By no means can the current state of coinductive reasoning and co-LP handle or solve all the problems and challenges in the problems of circular rhetoric and paradoxes of circularity.

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(2) A New Interpretive Framework for “I am” sayings in John
(3) Circular Rhetoric and Paradoxes in Matthew 22:15-46
(4) A New Critical Method toward the Validity and Interpretation of Paradox of Circularity
(5) A New Interpretive Paradigm for Melchizedek in Hebrews 7
(6) Circular Rhetoric and Paradox in John 1:15 and 1:30
(7) “Already and Not Yet” in Salvation History

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Abstract.

In the early twentieth century, Russell pioneered the formal study of paradox in logic. Understanding the cause of the paradoxes, the proposed remedy was to avoid any circular logic or to treat any circular logic as invalid. Following this scholarly trend, the study of biblical paradox has been one of the most controversial and confusing areas in contemporary biblical scholarship for the latter half of the twentieth century. However, a renewed interest has ensued due to the innovative approach pioneered by Kripke in the study of paradox and circularity. This paper presents and explores this new paradigm to facilitate an understanding of the paradoxes of circularity and various circular constructs in the Bible. The selected examples in this paper include three paradoxes in Matthew 22:15–46, the Liar paradox in Titus 1:12, the divine “I am” sayings in Exodus 3:14, the circular indwelling relationships in John 14:10–11, and two proof methods in John 8:12–20. One proof method in John 8:12–20 is distinctively self-referential to the validation of a personal claim to be the light of the world. The approach of this paper is computational, providing a key to understanding circular rhetoric and paradoxes in the Bible.

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