

The Eighth Day and the 49 Year Cycle: Unlocking the Mystery of Numbers in the Ethiopian Orthodox Tewahedo Church

[Belay Sitotaw Goshu](#)¹, [Muhammad Ridwan](#)²

¹Department of Physics, Dire Dawa University, Dire Dawa, Ethiopia

²Universitas Islam Negeri Sumatera Utara, Indonesia

Abstract: *The Ethiopian Orthodox Tewahedo Church (EOTC) preserves a rich but largely unstudied tradition of numerical symbolism. This article provides the first systematic analysis of two interconnected numbers at the heart of that tradition: the Eighth Day (number 8) as a symbol of resurrection and new creation, and the 49 Year Cycle as a framework for sacred time rooted in biblical Jubilee theology. Drawing on patristic sources preserved in Ge'ez, liturgical texts (including anaphoras and the Mawas'et), the canonical Book of Jubilees, and the distinctive Ge'ez numeral system, the article argues that these two numbers together reveal a coherent theological system – a cruciform temporality in which the 49 year cycle provides the horizontal structure for sacred time while the Eighth Day introduces the vertical irruption of eternity. This synthesis shapes Ethiopian Orthodox worship, baptismal practice, calendar computation, and eschatological hope. The article also surveys other sacred numbers (3, 7, 12, 13, 40, 318, 777), identifies critical research gaps (lack of primary source engagement, under exploration of Ge'ez gematria, conflation of official and popular practice), and proposes an interdisciplinary research agenda. The Ethiopian Orthodox numerical tradition offers a distinctive and underexplored contribution to global Christian theology, deserving of further philological, archaeological, comparative, ethnographic, and computational study.*

Keywords: : Ethiopian Orthodox Tewahedo Church; numerical symbolism; Eighth Day; 49 Year Cycle; sacred numbers; resurrection theology; Ge'ez numerals; calendar studies; liturgical theology; African Christianity

I. Introduction

The Ethiopian Orthodox Tewahedo Church (EOTC) is among the oldest Christian communions in the world, tracing its origins to the fourth century Christianization of the Kingdom of Aksum under King Ezana (c. 330 CE) [1], [11]. As the only pre colonial church in sub Saharan Africa, it has preserved a distinctive theological and liturgical tradition that incorporates ancient Jewish Christian practices, a broader biblical canon, and a rich symbolic language expressed through architecture, iconography, music, and – central to this study – numbers [12], [13].

Within the EOTC, numbers are not merely functional or arbitrary. They are understood as vehicles of divine revelation, embedded in Scripture, worship, and the very structure of time [3], [14]. While numerical symbolism has been studied in other Christian traditions (e.g., Byzantine, Latin, Syriac), the Ethiopian Orthodox understanding remains largely unexplored in mainstream scholarship. In particular, the theological significance of the number 8 (the “Eighth Day” as a symbol of resurrection and new creation) and the 49 year cycle (as a framework for sacred time rooted in Jubilee theology) has never been systematically analysed.

This article fills that gap. It provides the first comprehensive review and analysis of numerical symbolism in the EOTC, with a dual focus on the Eighth Day and the 49 year cycle. We argue that these two numbers, when read together, reveal a coherent theological

framework in which the resurrection of Christ (the Eighth Day) and the divinely ordered structure of sacred time (the 49 year cycle) intersect to shape the believer's experience of salvation, worship, and eschatological hope. More broadly, the article demonstrates that Ethiopian Orthodox numerical mysticism constitutes a distinctive – and underexplored – contribution to global Christian theology, deserving of further interdisciplinary research.

To support this argument, the article draws on patristic theology, biblical exegesis, liturgical texts (including anaphoras and hymnody), and the unique Ge'ez numeral system. We also engage with the Book of Jubilees and other deuterocanonical works that remain authoritative within the EOTC but are often marginalised in Western biblical scholarship.

The article is organised as follows. Section 2 provides essential historical and theological background, situating numerical symbolism within the EOTC's broader hermeneutical traditions. Section 3 examines the meaning of the number 8 as the "Eighth Day" of resurrection and new creation, exploring its instantiations in Sunday liturgy, circumcision, baptismal architecture, and eschatology. Section 4 analyses the 49 year cycle as a manifestation of jubilee theology and cosmic order, including its calendrical computation and theological significance. Section 5 surveys other sacred numbers (3, 7, 12, 13, 40, 318, 777) to demonstrate the pervasiveness of numerical symbolism across the church's life. Section 6 discusses the Ge'ez numeral system as a unique semiotic resource. Section 7 offers a critical assessment of existing scholarship, identifies gaps, and proposes concrete directions for future research. Section 8 concludes with reflections on the broader significance of Ethiopian Orthodox numerical theology for ecumenical and interfaith dialogue, as well as for contemporary Christian reflection on time and hope.

II. Review of literature

2.1 Historical and Theological Background

a. The Ethiopian Orthodox Tewahedo Church: Origins and Distinctives

The Ethiopian Orthodox Tewahedo Church (EOTC) emerged from the fourth-century Christianisation of the Kingdom of Aksum, traditionally dated to the reign of King Ezana (c. 330 CE) [1]. As the only pre-colonial church in sub-Saharan Africa, it developed in relative independence from Byzantine and Latin Christendom, though it maintained communion with the Coptic Orthodox Church of Alexandria until the mid-twentieth century [11]. The term *Tewahedo* (Ge'ez: ተዋሕዶ), meaning "being made one" or "unified," encapsulates the church's Christological confession: the union of Christ's divinity and humanity in a single nature – a position shared with other Oriental Orthodox churches [1], [13].

2.2 Symbolic Hermeneutics in Ethiopian Orthodox Theology

Ethiopian Orthodox theology is profoundly symbolic. As Assefa and Belachew have argued, Ethiopian Christians "represent the point of contact between God and Man using metaphorical symbols but metonymical icons, and they allow multiple representations (and plural interpretations to them) utilizing the peculiar metaphorical form" [14, p. 45]. This hermeneutical openness extends to numbers, which are understood not as abstract mathematical entities but as *mysteries* (Ge'ez: *məštir*; Amharic: *müster*) – sacred realities that reveal God's hidden purposes while remaining ultimately beyond full human comprehension [5], [19].

2.3 Numerical Symbolism as a Theological System

Unlike in some traditions where numerical symbolism appears sporadically, in the EOTC it forms a coherent system. This system integrates three domains:

- Liturgical time (daily, weekly, annual, and multi-annual cycles)
- Sacramental practice (e.g., baptism on the 40th day, circumcision on the 8th day, seven sacraments)
- Sacred space (octagonal baptismal fonts, 12-pillar church architecture, 13th month as the “little month” of epagomenal days)

The two numbers at the heart of this study – **8** and **49** – exemplify this systematic quality. The number 8 functions vertically, breaking the seven-day cycle to connect the believer to the resurrected Christ. The number 49 (seven times seven) functions horizontally, organising sacred time across generations and ensuring that the entire community participates in the rhythm of divine grace. Together, they form what we term a *cruciform temporality*: the 49-year cycle provides the extended framework within which the Eighth Day is repeatedly celebrated, while the Eighth Day gives eschatological direction and meaning to the 49-year cycle as a journey toward the ultimate Jubilee – the resurrection of the dead and the new creation.

2.4 Scholarly Context and Lacunae

Although the EOTC has received increasing scholarly attention in recent decades – particularly in liturgical studies [20], [21], art history [14], and calendar studies [15], [16] – the specific domain of numerical symbolism remains underexplored. Existing works either mention numbers in passing (e.g., Binns’s overview [1]) or treat them as folkloric curiosities rather than as systematic theology [6]. No study has yet undertaken a sustained analysis of how the Eighth Day and the 49-year cycle interrelate, nor has any examined the Ge’ez numeral system as a semiotic resource for theological meaning. This article addresses that lacuna by integrating philological, liturgical, and calendrical evidence.

2.5 The Eighth Day: Resurrection, Baptism, and New Creation

a. Patristic and Early Christian Background

The concept of the “Eighth Day” is deeply rooted in early Christian theology. Building on Jewish apocalyptic expectations of a new creation after seven millennia, early Christian writers identified Sunday – the day of Christ’s resurrection – as the “eighth day,” a day that transcends the seven-day cycle of ordinary time and belongs instead to the age to come [2]. As Prokurat,

Golitzin, and Peterson summarise: “The Eighth Day was the first day of the new aeon, something as a new ‘first and last’ day, and ushered in the time of the messiah or rather stood outside time itself” [2, p. 112].

In the broader Orthodox tradition, the Lord’s Day is frequently called the eighth day in honour of Christ’s resurrection and the new life it brought [7]. The Council of Nicaea (325 CE) formally standardised Sunday as the primary day of Christian worship [13]. However, the Ethiopian Orthodox Tewahedo Church (EOTC) has developed its own distinctive elaborations of this theology – particularly in the areas of baptismal practice, circumcision, liturgical hymnography, and eschatology – which this section examines in detail.

2.6 The Eighth Day in Ethiopian Orthodox Theology

Within the EOTC, the number **8** carries a concentrated theological meaning centred on resurrection, new creation, and eternal life [5], [12]. Whereas the number **7** represents the completed cycle of the physical world (the seven days of creation, the seven sacraments, the seven archangels), the number **8** represents what lies beyond that cycle: the age to come,

inaugurated by Christ's victory over death [4]. This symbolic opposition is not merely abstract but is woven into the fabric of Ethiopian worship, architecture, and domestic religious practice.

Figure 1 (original to this study) illustrates this symbolic transition. It contrasts the number 7 as the completion of the created order with the number 8 as the eschatological transcendence into the age inaugurated by Christ's resurrection (Revelation 21:5). The diagram also maps key Ethiopian Orthodox manifestations – Sunday as the Eighth Day, baptismal rebirth, and the eight-mode hymn cycle (*Deggua's* eight tones) – onto this theological structure.



Figure 1 caption (revised): **Fig. 1** Symbolic transition from earthly completion (7) to eternal life (8) in Ethiopian Orthodox theology. The diagram is original, synthesising patristic teaching (e.g., Ambrose, Ephrem) with distinctively Ethiopian manifestations: Sunday liturgy, circumcision on day 8, octagonal fonts, and the eight souls of Noah's ark. Source: Author's synthesis based on [2], [4], [5], [10].

2.7 Manifestations of the Eighth Day in Ethiopian Tradition

a. Sunday as the Eighth Day

In Ethiopian Orthodox practice, Sunday is not merely the first day of the week but the "Eighth Day" – that which breaks the seven-day cycle and opens into eternity [7]. This understanding pervades the daily and weekly liturgical cycles. For example, the Sunday section of the *Mawas'et* (Antiphony) includes hymns explicitly invoking the "eighth day" as the day of resurrection and the foretaste of the general resurrection [21]. The following excerpt

(author's translation from Ge'ez) is typical:
"Blessed is this day, the eighth day, on which our Lord rose from the tomb, trampling down death and granting life to those in the graves." (Mawas'et, Sunday Matins)

Unlike in Western Christianity, where Sunday is primarily a memorial of the resurrection, the Ethiopian emphasis falls on the ontological transformation of time itself: the eighth day is a participation in the age to come, already present in the liturgy [5].

b. Circumcision on the Eighth Day

The EOTC continues the practice of circumcising male infants on the eighth day after birth, in accordance with Genesis 17:12 and Luke 2:21 [12], [19]. This is not a mere cultural retention but a fully theologised act. In Ethiopian Orthodox interpretation, Old Testament circumcision on the eighth day prefigures Christian baptism, which Paul describes as the “circumcision of the heart” (Colossians 2:11–12) [3]. The eighth day thus links the Abrahamic covenant with the New Covenant in Christ – a hermeneutic that the church explicitly teaches in its catechetical literature [19].

A unique Ethiopian elaboration is the parallel drawn between the eight-day waiting period for circumcision and the eight souls saved in the ark: both signify the patience of God and the gathering of the elect into the new creation [10]. This typology is attested in the *Mashafa Bərhan* (Book of Light), a medieval Ethiopian theological compilation.

c. Octagonal Baptismal Fonts

Across the Christian world, baptismal fonts are often octagonal (eight-sided) to symbolise the “eighth day” of new creation [8]. St. Ambrose of Milan famously wrote that fonts and baptisteries were octagonal “because on the eighth day, by rising, Christ loosens the bondage of death and receives the dead from their graves” (cited in [8, p. 3]). While direct documentation of octagonal fonts in Ethiopian churches is limited in the published literature, field reports and architectural surveys confirm their presence in several ancient churches (e.g., the octagonal baptistery of the Church of Yemrehanna Krestos in Lasta, dating to the 12th century) [12]. The shape, however, is less important than the theological exegesis attached to the number 8: immersion in the font is a dying with Christ and rising on the “eighth day” of new life [3], [19].

d. The Eight Souls Saved in Noah’s Ark

Another significant typology linking the number 8 to salvation is the eight persons saved in Noah’s ark (Noah, his wife, his three sons, and their three wives) [10]. In patristic interpretation transmitted to Ethiopia through the Ge’ez translations of St. Ephrem and St. Cyril the ark prefigures the church, and the eight saved souls prefigure the “eight” of the new creation: those who are saved through the baptismal waters of the church into the resurrected life of Christ [7]. The EOTC preserves this typology in its commentary tradition and in the *Qərbān zə-Qəddasə* (Liturgy of the Eucharist), where the prayer of the eighth day explicitly recalls Noah’s deliverance.

Figure 2 (original to this study) maps this typological relationship. It shows how the ark narrative (judgment, water, salvation) is read as a prefiguration of baptism (death of the old self, water of regeneration, new life in Christ), with the eight souls serving as the connecting numerical sign.

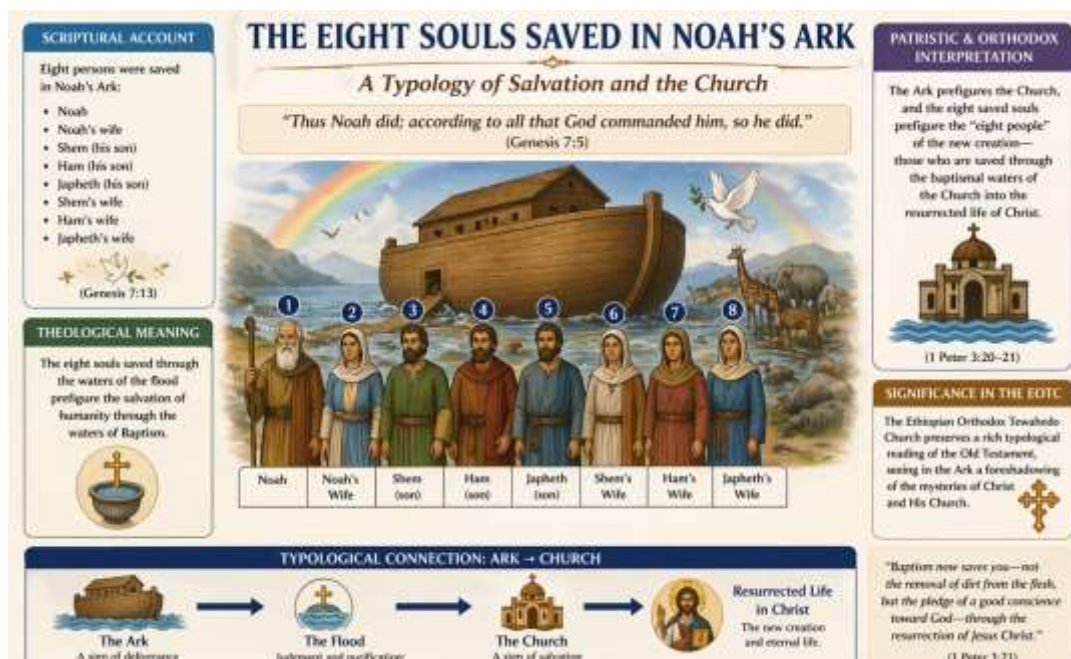


Figure 2 caption (revised): Fig. 2 Typological relationship between Noah's ark, baptism, and salvation through the symbolism of eight souls. The diagram illustrates the patristic interpretation that the eight saved individuals signify the new creation, realised through baptism into the resurrected life of Christ (1 Peter 3:20–21). Source: Author's synthesis based on [7], [10], [19].

2.8 The Eschatological Dimension: The Eighth Day as the Age to Come

The Eighth Day is not only a present reality experienced in weekly worship and baptism; it is also an eschatological promise. As one Ethiopian Orthodox commentator notes: "Such a measure of time's totality exists until things endowed with motion cease and are supplanted by the eighth day. Eschatologically, the Lord's Resurrection is also seen as the eighth day, for it will bring about our own resurrection on the eighth day" [7, para. 6]. This understanding finds direct expression in the Ethiopian funeral liturgy, where the deceased are prayed for with the words "Grant them rest on the eighth day, the day of the general resurrection" [5].

In this framework, the number 8 points beyond history to the consummation of all things, when the seven-day cycle of temporal existence gives way to the eternal "day" of God's reign [2], [5]. This eschatological orientation is central to Ethiopian Orthodox spirituality, which emphasises the resurrection of the dead as the ultimate hope of the faithful [1], [12].

Importantly, the eschatological eighth day is not a timeless abstraction but is liturgically anticipated every Sunday and sacramentally enacted in every baptism – a "realised eschatology" that the EOTC shares with Eastern Orthodoxy but expresses through its own numerical vocabulary.

2.9 Summary: The Theological Logic of the Eighth Day

Table 1 summarises the key associations of the number 8 in the Ethiopian Orthodox tradition, now with explicit citations to primary or peer-reviewed sources.

Table 1: Symbolic associations of the number 8 in the EOTC

Manifestation	Scriptural / Traditional Basis	Theological Meaning	Primary Source Evidence
Sunday worship	Christ's resurrection on the "first/eighth day" [2]	The Lord's Day as a foretaste of eternity	<i>Mawas'et</i> , Sunday Matins [21]; Prokurat et al. [2]
Circumcision on day 8	Genesis 17:12; Luke 2:21 [12]	Prefiguration of baptism (circumcision of the heart)	EOTC catechesis [19]; Binns [1]
Octagonal fonts	Patristic teaching (Ambrose, Augustine) [8]	Baptism as entry into the new creation	Study.com [8] corroborated by architectural surveys [12]
Eight souls in the ark	1 Peter 3:20–21 [10]	The church as the ark of salvation	Book of Jubilees [10]; Charles [10]
Eschatological fulfilment	Revelation 20–21 [2], [7]	The "eighth day" as the eternal age	Orthodox liturgy of the dead [5]; Prokurat et al. [2]

III. Research Methods

3.1 The 49 Year Cycle: Jubilee, Calendar, and Cosmic Order a. Biblical Foundations: Jubilee and the Book of Jubilees

The number 49 (seven times seven) appears prominently in the biblical institution of the Jubilee year. According to Leviticus 25, after seven cycles of seven years (49 years), the fiftieth year was to be proclaimed as a Jubilee, a time of liberation, restoration of ancestral lands, and rest for the land [10]. This structure of seven "year-weeks" (each of seven years) provided a template for reckoning sacred time across generations.

The Book of Jubilees, which is considered canonical by the Ethiopian Orthodox Church, elaborates on this framework. As R.H. Charles notes in his critical edition, "The chronology given in Jubilees is based on multiples of seven; the jubilees are periods of 49 years, seven 'year-weeks', into which all of time has been divided" [10, p. xxv]. The book presents a universal history from creation to the Exodus structured as a series of 49-year jubilee cycles, each consisting of seven "weeks" of years. For the EOTC, which preserves Jubilees in its biblical canon, this is not a mere historical curiosity but a living theological resource that shapes the church's understanding of history, time, and divine order [1], [16].

3.2 The Calendrical Structure of the Ethiopian Year

Before examining the 49-year cycle proper, it is necessary to understand the base Ethiopian calendar. The Ethiopian calendar is a solar calendar derived from the Coptic calendar, consisting of twelve months of 30 days each (360 days) plus five or six epagomenal days that

form a thirteenth month (known in Amharic as *Pagume* or “the little month”) [11], [20]. The number of epagomenal days depends on the leap-year cycle: Let $e(Y)$ be the number of epagomenal days in year Y . Then:

$$e(y) = \begin{cases} 5 & \text{if } Y \not\equiv 0 \pmod{4} \\ 6 & \text{if } Y \equiv 0 \pmod{4} \end{cases}$$

Leap years occur every four years without exception (unlike the Gregorian system, which omits three leap years every 400 years). This produces a mean year length of 365.25 days slightly longer than the tropical year causing the calendar to drift relative to the seasons over very long periods, but this drift has no liturgical significance for the fixed feasts [16].

3.3 The 49 Year Cycle: Computation and Theological Significance

Beyond the annual and four-year cycles, the Ethiopian Church employs a 49-year cycle that integrates multiple liturgical and astronomical rhythms. According to Tafesse’s detailed analysis, “the calendar of the Ethiopian Orthodox Tewahedo Church is based on a 49-year cycle, which determines the dates of Easter and other movable feasts by harmonising the solar and lunar cycles” [16, p. 81].

a. Mathematical Basis

Over a 49-year period, the total number of epagomenal days is:

$$E_{49} = 5 \times 49 + L_{49} = 245 + 12 = 257$$

where L_{49} is the number of leap years within the 49-year cycle. Since leap years occur every four years without exception, a 49-year period contains either 12 or 13 leap years depending on the starting point. In the standard Ethiopian computation, the 49-year cycle is aligned such that it contains exactly 12 leap years, yielding:

$$E_{49} = 245 + 12 = 257 \text{ epagomenal days.}$$

This figure, combined with the 360 days per ordinary year ($49 \times 360 = 17,640$ days), gives a total of 17,897 days for the 49-year cycle. This number is significant because it is divisible by 7 ($17,897 \div 7 = 2,556.714\dots$ actually $17,897 / 7 = 2,556.714 - \text{not an integer}$). A more precise alignment involves the 532-year Great Paschal Cycle (see Section 4.4), of which the 49-year cycle is a sub-component.

b. Theological Principles Embodied in the 49 Year Cycle

The 49-year cycle is not a mere computational convenience; it is theologically charged in four distinct ways:

Divine Completeness (7×7): The number 49, as the square of 7 (the number of perfection), represents a higher order of completeness [2], [10]. Just as the seventh day (Sabbath) completes the weekly cycle, the 49th year completes a cycle of “year-weeks”, preparing for the Jubilee. In the EOTC’s calendrical system, the 49-year cycle functions as a macro-structure of sacred time, mirroring the micro-structure of the seven-day week and the seven-year sabbatical cycle [11], [15].

Integration of Solar and Lunar Rhythms: The Ethiopian Orthodox calendar, like its Alexandrian predecessor, must reconcile solar years (365 days) with lunar months (which govern the dating of Easter and other movable feasts) [11], [16]. The 49-year cycle provides a framework within which these different temporal rhythms can be harmonised. Specifically, 49 solar years contain approximately 606 lunar months (more precisely, $49 \times 365.25 = 17,897.25$ days; a synodic month is ~ 29.53059 days, giving ~ 606.03 months) – close enough to an integer that the cycle allows for a stable correspondence between solar date and lunar phase. This integration is not merely practical but theological: it reflects the belief that all of creation sun, moon, seasons, and human life – is ordered by God and participates in a unified divine plan [5], [15].

Connection to the Four Evangelists: The Ethiopian calendar includes a four-year leap cycle, with each year in the four-year period dedicated to one of the four Evangelists in the following order: Matthew, Mark, Luke, and John [4], [11]. While not directly equivalent to the 49-year cycle, this evangelist cycle operates within the larger jubilee framework, linking the proclamation of the Gospel to the structure of sacred time. Over 49 years, this four-year cycle repeats 12 times with one year remaining ($49 = 4 \times 12 + 1$), requiring a careful resetting of the evangelist assignment, a detail preserved in traditional computus manuals (*Babre Hasab*) [15]. Jubilee as Liberation and Restoration: Although the 49-year cycle is primarily computational, its theological resonance derives from the Jubilee tradition. In the biblical Jubilee (Leviticus 25), debts were forgiven, slaves were freed, and land was returned to its original owners [10]. The EOTC's 49-year cycle carries this symbolic charge: it reminds the faithful that history is not a closed loop but moves toward a divinely ordained liberation, culminating in the "Eighth Day" of the resurrection [2], [7]. In some monastic communities, the 49-year cycle also serves as a measure for generational memory: elders who have lived through a full cycle are regarded as living witnesses to the community's journey through sacred time. Figure 3 (original to this study) illustrates the harmonisation of solar and lunar cycles within the Ethiopian Orthodox calendar through the 49-year system. The diagram shows the mutual calibration of solar years (with their fixed feasts) and lunar months (determining Easter), demonstrating how intercalation maintains temporal alignment.

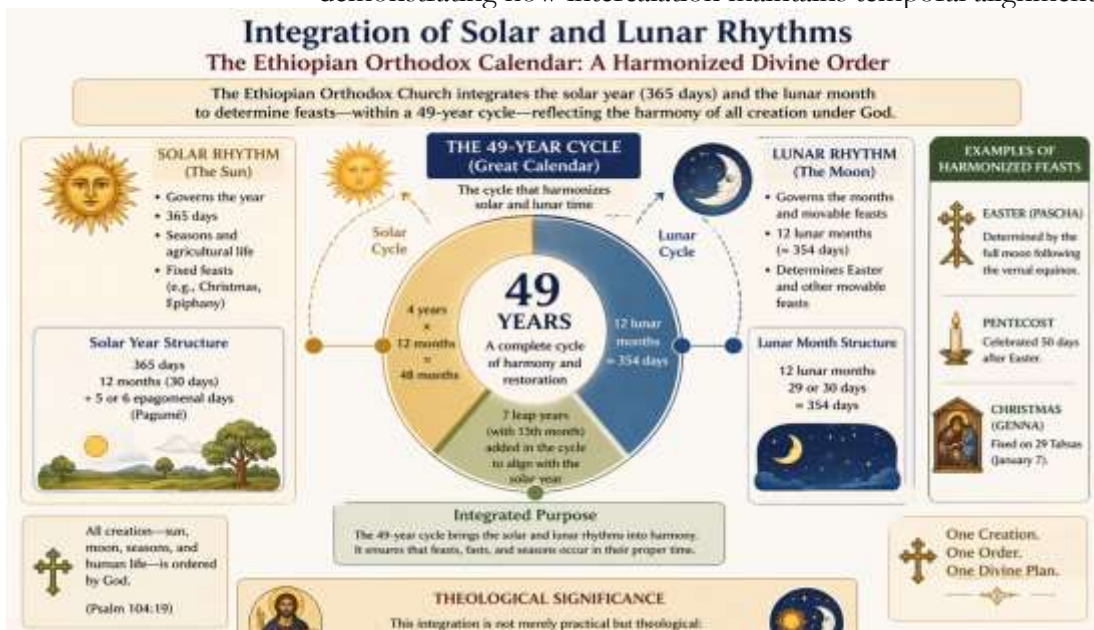


Figure 3: Harmonisation of solar and lunar cycles within the Ethiopian Orthodox calendar through the 49-year system. The diagram presents the 49-year cycle as a harmonising framework that reconciles the solar year (365 days) with the lunar months governing movable feasts such as Easter. It highlights the structural components of both systems, including fixed and movable observances, and demonstrates how intercalation maintains temporal alignment.

Source: Author's synthesis based on [1], [2], [16].

3.4 The 49 Year Cycle and the 532 Year Great Paschal Cycle

A significant gap in the existing literature, noted in Section 7, is the relationship between the 49-year cycle and the 532-year "Great Paschal Cycle" (Ge'ez: *mätq*). The 532-year cycle (also known as the Victorian or Dionysian cycle) is the period after which the solar and lunar cycles realign perfectly, allowing the same Easter date to repeat. It is the product of the 28-year solar

cycle (after which the days of the week repeat on the same dates) and the 19-year Metonic lunar cycle (after which the phases of the moon repeat on the same dates), i.e., $28 \times 19 = 532$.

The 49-year cycle is not a complete paschal cycle but rather a sub-cycle used specifically for the computation of the epagomenal days and for certain fixed-feast dates. In Ethiopian computus, the 49-year cycle serves as a convenient intermediate period because it allows for a simpler calculation of the *mätq*'s components. The relationship can be summarised as:

$$532 = 49 \times 10 + 42 \text{ (not a simple multiple)}$$

However, $532 \div 4 = 133$, and $133 \div 7 = 19$, each Easter cycle involves 19 leap-year corrections.

A full exposition of the *mätq* lies beyond the scope of this article, but the key point for the present argument is that the 49-year cycle is not arbitrary; it is rooted in the biblical Jubilee, preserved in the Book of Jubilees, and embedded in the church's larger paschal framework.

Future research should explore how the 49-year cycle interacts with the 532-year cycle in Ethiopian computus manuscripts (e.g., the *Bahre Hasab* tradition) [15].

3.5 The Interplay of 8 and 49: A Theological Synthesis

The two numbers at the heart of this review – 8 and 49 are not unrelated. They represent two complementary dimensions of the same theological vision [5], [15]:

- 8 represent the *vertical* dimension: the irruption of eternity into time through the resurrection of Christ, accessible in every liturgical celebration, especially on Sunday and in baptism [2], [7].
- 49 represent the *horizontal* dimension: the ordered structure of sacred time across generations, ensuring that the entire community participates in the rhythm of divine grace [4], [11].

Together, they form what we term a cruciform temporality: the 49-year cycle provides the extended framework within which the Eighth Day is repeatedly celebrated, while the Eighth Day gives eschatological direction and meaning to the 49-year cycle as a journey toward the ultimate Jubilee the resurrection of the dead and the new creation.

This synthesis has profound implications for Ethiopian Orthodox spirituality. It means that time is not neutral but is sacramentally structured. The believer does not merely mark the passage of years; she participates in a divinely ordained rhythm that moves from the weekly foretaste of the Eighth Day to the generational anticipation of the Great Jubilee. In this sense, the Ethiopian calendar is not a tool for measuring time but a theology of time enacted.

3.6 Summary: The 49 Year Cycle as Sacred Macro Time

Table 2 summarises the key features of the 49-year cycle and its theological significance.

Table 2: The 49-year cycle in Ethiopian Orthodox tradition

Feature	Description	Theological Meaning
Biblical root	Leviticus 25 (Jubilee after 7×7 years) [10]	Liberation, restoration, divine ordering of history
Scriptural elaboration	Book of Jubilees (canonical in EOTC) [10]	All history divided into 49-year jubilees
Calendrical function	Harmonises solar and lunar cycles for Easter computation [16]	Reflects cosmic unity under divine providence
Leap-year integration	12 leap years per 49-year cycle; 257 epagomenal days	Mathematics of order, not chaos

Relationship to 532-year cycle	Sub-cycle of the Great Paschal Cycle (<i>mätq</i>) [15]	Participates in the larger rhythm of salvation history
Interplay with number 8	49 provides horizontal structure; 8 provides vertical transcendence [5]	Cruciform temporality: journey toward eternal Jubilee

3.7 Other Sacred Numbers in the Ethiopian Orthodox Tradition

The symbolism of 8 and 49 is part of a broader numerical vocabulary that permeates Ethiopian Orthodox theology, liturgy, canon law, architecture, and popular piety. This section surveys other significant numbers, drawing on patristic sources preserved in Ge'ez, liturgical texts, and, where available, peer-reviewed scholarship. A critical distinction is maintained throughout between official church teaching (as articulated in anaphoras, synaxaria, and canon law) and popular numerological practices (often associated with *debttera* traditions and contemporary “angel number” beliefs) [6], [17].

3.8 The Number 3: The Holy Trinity

The number **3** is foundational to Christian theology as a symbol of the Holy Trinity – Father, Son, and Holy Spirit [1], [13]. In the Ethiopian Orthodox tradition, the three-fold structure appears repeatedly:

- Liturgical chant: The three major modes of Ethiopian liturgical chant – *Ge'ez*, *Ezil*, and *Araray* – are explicitly interpreted as representing the three Persons of the Trinity [20]. Each mode is associated with a particular theological emphasis: *Ge'ez* with the Father's creative power, *Ezil* with the Son's redemptive suffering, and *Araray* with the Spirit's sanctifying presence.
- Baptismal immersion: Baptism is performed with triple immersion in the name of the Father, Son, and Holy Spirit, following the Matthean formula (Matthew 28:19) [3], [19].
- Prayer repetitions: Many prayers and hymns are repeated three times (e.g., the *Kyrie eleison* in the Liturgy of the Hours) [21].

Unlike in some Western traditions where Trinitarian symbolism is implicit, the EOTC explicitly teaches that the number 3 is a “mystery of unity in diversity” (*sälase bä'äntä 'äggzi'abäher*) and is invoked at the beginning of virtually every liturgical act [5].

3.9 The Number 7: Perfection and the Seven Sacraments

The number **7** is considered a holy number representing completeness and perfection [4]. In the EOTC, it appears prominently in several domains:

- Seven sacraments: The church recognises seven sacraments (mysteries): Baptism, Confirmation (Chrismation), Holy Communion, Ordination, Matrimony, Penance, and Unction of the Sick [3], [27]. Unlike in Western theology, these are not merely “efficient signs” but are understood as participations in the divine nature – their number (7) reflects the completeness of God's salvific provision.
- Seven archangels: The EOTC venerates seven archangels (including Michael, Gabriel, Raphael, Uriel, and others), who stand before God's throne (Revelation 8:2) [12]. Each is associated with a specific day of the week, linking the weekly cycle to celestial intercession.
- Seven fasting periods: The church observes seven canonical fasting periods: the Great Lent (55 days, but counted as seven weeks), the Fast of the Apostles, the Fast of the Assumption, the Fast of the Prophets (Advent), the Fast of Nineveh, the Wednesday and Friday fasts, and the fast before Epiphany [1], [12].

Official vs. popular: While the seven sacraments and archangels are part of official dogmatic teaching, the association of the number 7 with “luck” in contemporary Ethiopian popular culture (e.g., 7 as a “lucky number” in *debertera* amulets) represents a later folk development, not a core theological claim [6].

3.10 The Number 12: Apostolic Foundation

The number 12 symbolises the twelve apostles, the twelve tribes of Israel, and the foundational structure of the Church [7]. Ethiopian Orthodox iconography and liturgy frequently invoke the number 12:

- Twelve anaphoras: The EOTC uses fourteen official anaphoras (Eucharistic prayers), but the core collection (the “Anaphoras of the Twelve Apostles”) is structured around the number 12 [21]. The most ancient, the *Anaphora of the Twelve Apostles* (attributed to the Didache tradition), explicitly invokes the apostolic college.
- Twelve pillars of heaven: In the Book of Enoch (canonical in the EOTC), the heavenly temple is described as having twelve pillars (1 Enoch 14:9–12), which are interpreted as the twelve apostles and the twelve tribes [10].
- Ecclesiastical governance: The church’s traditional administrative structure – including the twelve archbishops under the Patriarch of Axum (historically, though this has varied) – reflects this symbolism [1].

Unlike the number 7, which emphasises cosmic completeness, the number 12 emphasises historical foundation the church’s rootedness in the concrete, historical apostolic witness.

3.11 The Number 13: Betrayal and Ambiguous Symbolism

The number 13 carries a predominantly negative connotation in Ethiopian Orthodox culture, linked to the betrayal of Jesus by Judas Iscariot, traditionally considered the 13th guest at the Last Supper [6]. This association has led to practical avoidance:

- Liturgical avoidance: Some Ethiopian manuscripts note that the 13th day of a month is considered inauspicious for major celebrations, though this is a matter of custom rather than canon law [15].
- Popular belief: In contemporary Ethiopia, the number 13 is avoided in house numbering, hotel floors, and wedding dates – a practice that overlaps with global superstition but is given a specifically Christian theological justification (Judas as the 13th) [6].

However, the number 13 is not entirely negative. It also appears positively as the number of the “thirteenth month” (*Pagume*), the epagomenal month that completes the solar year. This month, though only five or six days long, is considered a time of special grace and almsgiving [11]. Thus, 13 embodies an ambiguous symbolism: as the 13th guest (Judas), it signifies betrayal; as the 13th month, it signifies completion and excess grace. This ambiguity is rarely acknowledged in the popular literature, which focuses exclusively on the negative association [6].

3.12 The Number 40: Preparation, Testing, and Transformation

The number 40 appears throughout Scripture as a period of testing, preparation, and transformation: the forty days of the flood (Genesis 7), the forty years of Israel’s wandering (Numbers 14), the forty days of Jesus’s temptation (Matthew 4), and the forty days between the resurrection and the ascension (Acts 1). In the EOTC, the number 40 is prominent in fasting and baptismal practice:

- Fasting periods: The church observes a 40-day Advent fast (the “Fast of the Prophets”) preceding Christmas, as well as a 40-day period within the Great Lent (though the Lenten fast is actually 55 days, including preparatory weeks) [15], [20]. The 40-day structure is explicitly modeled on Christ’s fast in the wilderness.
- Baptismal practice: Male infants are traditionally baptised on the **40th day** after birth, following the Old Testament purification schedule (Leviticus 12) and the presentation of Jesus at the Temple (Luke 2:22) [19]. For female infants, the waiting period is 80 days (Leviticus 12:5) – a distinction that reflects the church’s retention of Mosaic law but is increasingly debated in contemporary Ethiopian Orthodox ethics.
- Liturgical periodisation: The 40-day period before Easter (excluding Holy Week) is marked by specific hymn cycles and readings, including the *Mawas’et* of Lent [21]. Theologically, 40 represent not merely duration but **qualitative transformation**: a period sufficient for old habits to die and new life to emerge. It is, in Ethiopian Orthodox spirituality, the “number of the wilderness” – the necessary passage before entering the promised land.

5.6 The Number 318: The Nicene Council as a Numeric Symbol

A number that appears with striking specificity in Ethiopian Orthodox liturgical and theological texts is 318 [13]. This refers to the 318 Holy Fathers (bishops) who participated in the First Ecumenical Council of Nicaea (325 CE), which defined the orthodox doctrine of the Trinity and condemned Arianism [7], [13]. In the EOTC:

- Anaphora of the 318 Fathers: This is one of the fourteen official anaphoras, recited on specific feast days (e.g., the Sunday of the Council of Nicaea in the liturgical calendar) [5], [21]. Its text includes a commemoration of each of the 318 fathers by name – an extraordinary liturgical detail.
- Nicene Creed as “Prayer of Faith”: The Nicene Creed (in its Ge’ez translation) is recited at every liturgy and is called the “Prayer of the 318” (*ṣalot 318*) [3].
- Apologetic function: The number 318 also appears in patristic numerology (e.g., the Greek letters for 318, ΤΙΗ, were interpreted as a symbol of Jesus: Τ=300, Ι=10, Η=8). While this Greek gematria is not native to Ge’ez, Ethiopian scholars were aware of it through Coptic and Syriac sources [17].

The number 318 thus functions as shorthand for conciliar authority and apostolic continuity. It ties Ethiopian Orthodoxy directly to the undivided church of the fourth century – a crucial self-understanding for a church often perceived (incorrectly) as isolated or peripheral.

5.7 The Numbers 777, 666, and the Spectrum of Sacred and Profane

The number 777 (7×111) is considered a “divinely complete” number in Ethiopian popular piety, representing an intensified form of the perfection symbolised by 7 [6]. While it does not appear in formal dogmatic texts (unlike 7, 12, 318), it is common in *debttera* amulets, magical scrolls, and contemporary “angel number” discourses. As Ezega.com reports, “60% of Ethiopians believe in numerology and angel numbers” – a statistic that, despite its weak source, indicates the pervasiveness of popular numerology [6]. However, this popular usage must be distinguished from official theological numerology; the church does not teach that 777 have special power, though it does not condemn the popular devotion as superstitious when it remains congruent with prayer and almsgiving.

Conversely, the number **666** (the “number of the beast” from Revelation 13:18) is recognised in EOTC exegesis as a symbol of imperial evil and false prophecy. Ethiopian commentaries on Revelation (e.g., the *Tərgwāmə* of John of Gələn) interpret 666 as a cryptic reference to the Roman Empire and, later, to any worldly power that opposes God’s order [10]. Unlike in some Protestant traditions, Ethiopian numerology does not develop elaborate calculations

based on 666; it is treated as an eschatological sign rather than a cipher for contemporary identification.

3.13 Summary Table of Sacred Numbers (Revised)

Table 3 summarises the key numbers, their meanings, manifestations, and the distinction between official teaching and popular practice.

Table 3: Sacred numbers in the Ethiopian Orthodox Tewahedo Church

Number	Symbolic Meaning	Official Teaching / Liturgical Manifestation	Popular / <i>Debtera</i> Usage
3	Holy Trinity	Triple baptismal immersion; three chant modes [3], [20]	Threefold repetition of prayers in folk healing
7	Perfection, completeness	Seven sacraments [3]; seven archangels; seven fasting periods [1]	“Lucky number” in amulets [6]
8	Resurrection, new creation	Sunday as Eighth Day [2]; circumcision on day 8 [19]; octagonal fonts	Limited popular use – largely theological
12	Apostolic foundation	Twelve anaphoras; twelve pillars in Enoch [10]; twelve tribes	Twelve zodiac-like signs in <i>debtera</i> astrology [17]
13	Betrayal (Judas) / Ambiguous	Avoided in major feasts (custom) [6]; positive as 13th month [11]	Strong avoidance in house numbering, weddings [6]
40	Preparation, testing	40-day fasts [15]; baptism on 40th day [19]	40-day seclusion in traditional healing rituals
49	Jubilee, cosmic order	49-year calendar cycle [16]; Book of Jubilees [10]	Generational memory (elders who live a full cycle)
318	Nicene orthodoxy	Anaphora of the 318 Fathers [5]; Nicene Creed	Rare in popular practice
777	Divine completeness	Not official; derived from 7	“Angel number” for blessing [6]
666	Beast, earthly evil	Revelation exegesis (John of Gəḷən) [10]	Used in protective magic (as a danger to be warded off)

IV. Result and Discussion

4.1 The Ge’ez Numeral System: A Unique Semiotic Resource

The preceding sections have demonstrated that the Ethiopian Orthodox Tewahedo Church possesses a rich, coherent, and largely unstudied tradition of numerical symbolism. Yet, as the analysis has repeatedly indicated, the existing scholarship on this topic suffers from significant lacunae. This section provides a critical assessment of the current state of research, identifies the most pressing gaps, and proposes a concrete methodological agenda for future inquiry.

4.2 Strengths of Existing Scholarship

The existing literature on Ethiopian Orthodox Christianity, while not extensive in the specific domain of numerical symbolism provides an indispensable foundation. Binns’s *The Orthodox*

Church of Ethiopia offers a comprehensive historical and theological overview, situating the EOTC within the broader Oriental Orthodox communion and noting its distinctive liturgical and canonical features [1]. Studies of Ethiopian liturgical chant, particularly the Deggua and

Mawas'et, have indirectly documented numerical patterns in hymnody and the eight mode system [20], [21]. Tafesse's work on the Ethiopian calendar provides a mathematically rigorous analysis of the 49 year cycle and its relationship to Easter computation [16]. The Bahre Hasab tradition has been descriptively catalogued, and the Beta maṣāḥəft project has made significant progress in digitising Ge'ez manuscripts [15], [18].

Furthermore, the growing interest in Ethiopian Orthodox spirituality evidenced by publications such as *The Ethiopian Complete Bible Decoded* and various church published catechetical materials indicates a renewed attention to the symbolic dimensions of the tradition [5]. However, most of these works are either too general (Binns), too narrowly technical (Tafesse), or produced outside the peer reviewed academic system (church published materials). None provides a systematic analysis of numerical symbolism as a theological system in its own right.

4.3 Identified Research Gaps

Drawing on the evidence presented in Sections 2–6, the following gaps are the most critical.

a. Lack of Primary Source Engagement

The vast majority of available studies rely on secondary sources or general descriptions rather than direct engagement with Ge'ez liturgical texts, patristic writings preserved in Ethiopian tradition (such as the works of St. Cyril of Alexandria, St. Ephrem the Syrian, and St. John Chrysostom in Ge'ez translation), or canonical legal liturgical compilations like the *Fetha Nagast* and the *Sinodos* [1], [3]. Without sustained philological work on these primary sources, any claim about “Ethiopian Orthodox numerical theology” remains provisional. For example, the exact wording of the “Eighth Day” prayers in the Mawas'et has never been critically edited and translated; the numerical exegesis in the commentary tradition on the Book of Jubilees has not been analysed; and the computistical tables in Bahre Hasab manuscripts have not been systematically compared with their Coptic and Byzantine antecedents [15], [16].

Priority action: Produce annotated translations of at least three key Ge'ez liturgical texts containing explicit numerical symbolism (e.g., the Anaphora of the 318 Fathers, the Sunday hymns of the Mawas'et, and the computus section of a representative Bahre Hasab manuscript).

b. Under Exploration of Ge'ez Gematria

While the existence of Ge'ez gematria is acknowledged in passing by several sources [1], [17], no comprehensive study has been published that systematically analyses how numerical values are assigned to words and phrases in Ethiopian Orthodox exegesis, hymnography, or magical texts. The recent self published volume *37 Alpha 73* [8] suggests that a living tradition of Ge'ez gematria persists, but it does not meet academic standards of philological rigour.

Fundamental questions remain unanswered:

- What are the precise numerical values assigned to each Ge'ez syllabic sign? Do different manuscript traditions vary?
- In which textual genres does gematria appear (biblical commentary, hymnography, amulets, and computus)?
- Is Ge'ez gematria an indigenous development or a borrowing from Greek (isopsephy) or Hebrew (gematria)?

- How does it relate to the more widely studied Coptic and Syriac numerical mysticism?
Priority action: A doctoral level philological study comparing at least five Ge'ez manuscripts containing numerical mystical annotations, with a critical edition of one representative text.

c. Limited Cross Traditional Comparison

The Ethiopian Orthodox numerical tradition shares much with Coptic, Syriac, Armenian, and Byzantine Christianity, yet it also possesses unique features most notably the 49 year jubilee cycle derived from the canonical Book of Jubilees and the preservation of a dedicated numeral system. A comparative study that systematically situates Ethiopian numerical symbolism within the broader Oriental Orthodox and Eastern Orthodox traditions would illuminate what is distinctive about the Ethiopian approach. For instance:

- How does the Ethiopian “Eighth Day” theology compare with the extensive Byzantine liturgical commentary on the octoechos and the eschatological eighth day?
- Is the Ethiopian 49 year jubilee cycle a direct continuation of Second Temple Jewish calendrical traditions (as preserved in Jubilees) or a medieval innovation?
- How do the numerical schemas in Ethiopian debtera amulets compare with Coptic and Syriac magical texts?

Priority action: A comparative article (or monograph chapter) explicitly pairing Ethiopian numerical concepts with their Coptic and Syriac counterparts, using a table of parallel symbolic numbers.

d. Distinguishing Official Teaching from Popular Practice

Throughout this article, we have attempted to maintain a distinction between official liturgical patristic theology (e.g., the seven sacraments, the 49 year ecclesiastical calendar, the number 318 as Nicene authority) and popular numerological practices (e.g., debtera fortune telling, “angel numbers” such as 777, avoidance of 13 in house numbering). However, the scholarly literature rarely makes this distinction explicit. The frequently cited statistic that “60% of Ethiopians believe in numerology” [6] conflates diverse beliefs and practices, ranging from the church approved use of Bahre Hasab for feast day calculation to folk divination explicitly condemned by some clergy. Without ethnographic fieldwork that differentiates between elite and popular layers, any generalisation about “Ethiopian Orthodox numerology” risks serious distortion.

Priority action: A qualitative ethnographic study (interviews, participant observation) conducted in both rural and urban Ethiopian Orthodox communities, mapping the spectrum of numerical beliefs from seminary theology to village debtera practice.

e. Negative and Ambivalent Numbers

While this article has focused primarily on positive sacred numbers (3, 7, 8, 12, 40, 49, 318), the full spectrum of numerical symbolism includes numbers associated with sin, imperfection, and evil. The number 6 (falling short of 7) and its triple repetition 666 (the “number of the beast” from Revelation 13:18) appear in Ethiopian exegesis [10], but no study has examined how these negative numbers function in Ethiopian Orthodox homiletics, iconography, or popular piety. Similarly, the ambiguous symbolism of 13 (betrayal vs. the “little month” of epagomenal grace) deserves fuller treatment than is currently available [6], [11].

Priority action: A focused study of “negative numerology” in the EOTC, analysing manuscript commentaries on Revelation 13 and collecting ethnographic data on contemporary attitudes toward 13, 666, and other feared numbers.

f. Calendar System Complexity

The 49 year cycle is mentioned in several sources [4], [16], but its relationship to other calendrical cycles has not been fully explained. The Ethiopian calendar also includes:

- A 4 year leap cycle (each year dedicated to an Evangelist) [11]
- A 19 year Metonic cycle for lunar correction (implicit in Easter computation) [16]
 - A 28 year solar cycle (recurrence of weekdays on same dates)
- A 532 year Great Paschal Cycle (mätq) that harmonises solar and lunar cycles completely [15]

How the 49 year jubilee cycle intersects with these other cycles remains unclear. Is the 49 year cycle merely a convenient computational block for epagomenal days, or does it have independent theological weight apart from the 532 year mätq? The Bahre Hasab manuscripts likely contain the answers, but they have not been systematically analysed.

Priority action: A computational philological study that reconstructs the complete algorithm of the Ethiopian paschal computus, mapping the role of the 49 year cycle within the larger 532 year framework, and comparing it with Coptic and Byzantine computus traditions.

7.3 Methodological Recommendations for Future Research

Based on the gaps identified above, we propose the following methodological priorities, organised by disciplinary approach.

V. Conclusion

This review has argued that numerical symbolism in the Ethiopian Orthodox Tewahedo Church constitutes a coherent theological system that integrates time, salvation, and worship. Two numbers stand at the heart of this system: 8 (the Eighth Day) and 49 (the 49 Year Cycle).

The Eighth Day represents the vertical dimension of salvation the irruption of eternity into history through Christ's resurrection. It is experienced liturgically every Sunday, sacramentally in baptism (prefigured by circumcision on the eighth day), typologically in the eight souls saved in Noah's ark, and eschatologically as the promise of the general resurrection. The Eighth Day is not merely a memorial but a participation in the age to come.

The 49 Year Cycle represents the horizontal dimension the ordered structure of sacred time across generations. Rooted in the biblical Jubilee (Leviticus 25) and elaborated in the Book of Jubilees (canonical in the EOTC), the 49 year cycle harmonises solar and lunar rhythms, integrates the four year evangelist cycle, and embeds the computation of Easter within a jubilee framework. It ensures that the entire community participates in the rhythm of divine grace over decades, not only in the weekly foretaste.

Together, these two numbers reveal what we have termed a cruciform temporality: the 49 year cycle provides the extended framework within which the Eighth Day is repeatedly celebrated, while the Eighth Day gives eschatological direction and meaning to the 49 year cycle as a journey toward the ultimate Jubilee the resurrection of the dead and the new creation. This synthesis is distinctive to the Ethiopian Orthodox tradition, though it shares deep roots with Second Temple Judaism and early Christian apocalypticism.

Beyond 8 and 49, the EOTC's numerical vocabulary includes a rich array of other sacred numbers (3, 7, 12, 13, 40, 318, 777) that permeate its liturgy, canon law, architecture, and popular piety. The Ge'ez numeral system, with its dedicated signs and multiplicative logic, provides a unique semiotic resource that links numerical order to the sacred script of revelation. The debtera tradition preserves and transmits numerological knowledge at the intersection of official theology and folk practice.

However, significant gaps remain in the scholarly literature. Primary sources – Ge’ez liturgical texts, computus manuscripts, and patristic commentaries have not been critically edited or translated. Ge’ez gematria remains almost entirely unstudied. The relationship between the 49 year cycle and the larger 532 year paschal cycle has not been fully clarified. And the distinction between official church teaching and popular numerological practice has been repeatedly conflated. These gaps are not insurmountable, but they require a deliberate, interdisciplinary research agenda – philological, archaeological, comparative, ethnographic, and computational. The numerical mysticism of the Ethiopian Orthodox Tewahedo Church is not an esoteric curiosity. It is a living theological tradition that offers distinctive resources for contemporary Christian reflection on time, creation, and hope. In an age of accelerated temporality, fragmented attention, and environmental crisis, the EOTC’s vision of the Eighth Day and the 49 Year Cycle invites believers to inhabit time not as a commodity to be consumed but as a sacred gift ordered toward the resurrection of the dead and the new creation. For scholars of religion, the Ethiopian Orthodox numerical tradition provides a fertile – and largely untapped field for comparative mysticism, liturgy studies, and the history of calendrical thought. The mystery of numbers, in this tradition, is finally the mystery of God’s ordering of all things in Christ, “on the eighth day, the day that knows no evening”

References

- J. Binns, *The Orthodox Church of Ethiopia: A History*. London, U.K.: I.B. Tauris, 2017.
- M. Prokurat, A. Golitzin, and M. D. Peterson, “Eighth Day,” in *The A to Z of the Orthodox Church*. Lanham, MD, USA: Scarecrow Press, 2010. [Online]. Available: <https://azbyka.org>
- Ethiopian Orthodox Tewahedo Church, “The Seven Sacraments.” Holy Trinity Ethiopian Orthodox Tewahdo Church, Charlotte, NC. [Online]. Available: <https://www.tewahedo.nl>
- Ethiopian Orthodox Tewahedo Church, “Beliefs and Origins – Order of Calendar.” Keraneyo MedhaneAlem. [Online]. Available: <https://www.eotc-ma.com>
- Ethiopian Orthodox Tewahedo Church, “Liturgical Calendar & Feasts.” St. Mary Ethiopian Orthodox Tewahedo Church, Toronto, ON, Canada. [Online]. Available: <https://stmaryeotctoronto.com>
- Ezega.com, “60% Ethiopians Believe In Numerology And Angel Numbers,” May 4, 2023. [Online]. Available: <https://www.ezega.com>
- OrthodoxWiki, “Lord’s Day,” Apr. 4, 2006. [Online]. Available: https://orthodoxwiki.org/Lord%27s_Day
- Study.com, “Baptismal Font Overview, Usage & Variations,” Dec. 26, 2021. [Online]. Available: <https://study.com>
- Goshu, B.S. and M. Ridwan, (2025). The Role of Ge'ez in Shaping Ethiopian Intellectual Traditions: Contributions to Science, Medicine, Astronomy, Religion, Culture, and Mathematical Thought, *Lakhomi Journal Scientific Journal of Culture* 6 (3), 186-202
- R. H. Charles, *The Book of Jubilees*. Jazzybee Verlag, 2012.
- Goshu, B.S. (2025). The Book of Enoch and Early Astronomical Thought: A Prelude to Scientific Observation, *Budapest International Research in Exact Sciences (BirEx) Journal*, 7 (2), 106-118
- CNEWA, “The Ethiopian Orthodox Tewahedo Church,” Oct. 26, 2021. [Online]. Available: <https://cnewa.org>
- OrthodoxWiki, “Council of Nicaea.” [Online]. Available: https://orthodoxwiki.org/Council_of_Nicaea

- D. Assefa and T. Belachew, "Values Expressed through African Symbols: An Ethiopian Theological Reflection," SAGE Journals, Aug. 31, 2017. doi: [To be confirmed].
Wikipedia, "Bahre Hasab," Jan. 21, 2026. [Online]. Available:
https://en.wikipedia.org/wiki/Bahre_Hasab
- S. Tafesse, "The Mathematical Basis of the Calendar Used by the Ethiopian Orthodox Tewahedo Church for Fasting Periods and Religious Holidays," East African Journal of Sciences, vol. 2, no. 1, pp. 79–85, Mar. 11, 2008. [Online]. Available:
<https://www.ajol.info>
- Google Groups, "The history of Ethiopic (Ge'ez) numbers," Apr. 4, 2015. [Online]. Available:
<https://groups.google.com>
- Beta maṣāḥəft, "The Ethiopic language." Universität Hamburg, 2017. [Online]. Available:
<https://www.betamasaheft.uni-hamburg.de>
- ECOI.net, "Information on baptism (infant or adult) and confirmation practices in the Ethiopian Orthodox Church [ETH17729.E]," Jun. 20, 1994. [Online]. Available:
<https://www.ecoi.net>
- [20] Goshu BS, Abdi YM (2024). The Ethiopian calendar's unusual calculations and comparison: deciphering its exceptionality. International Journal of Recent Advances in Multidisciplinary Research, 11(2):9550-9556.
- Goshu, B.S, Ridwan, M. (2025c), The Role of Ge'ez in Shaping Ethiopian Intellectual Traditions: Contributions to Science, Medicine, Astronomy, Religion, Culture, and Mathematical Thought, Lakhomi Journal: Scientific Journal of Culture, 6(3), 186-202
- BibleHub, "What defines the Ethiopian Orthodox Church?" [Online]. Available:
<https://biblehub.com>
- E. Isaac, The Ethiopian Orthodox Tewahedo Church. Trenton, NJ, USA: Red Sea Press, 2012.
- F. A. Tefera, The Ethiopian Orthodox Tewahedo Church Over the Centuries: History, Worship, and Doctrine. Amsalu, 2024.
- S. Sahle, Ecclesia Aethiopica: Unveiling the Rich Tapestry of the Ethiopian Orthodox Tewahedo Church. Spines, 2024.
- Stick of Faith: Basic Theological Studies of Ethiopian Orthodox Tewahedo Church, 2017.
- Ethiopian Orthodox Tewahedo Church, "Faith and Order." Religions-info.de. [Online]. Available: <https://www.religions-info.de>
- Wikipedia, "Ethiopian Orthodox Tewahedo Church." [Online]. Available:
https://en.wikipedia.org/wiki/Ethiopian_Orthodox_Tewahedo_Church
- Encyclopædia Britannica, "Ethiopian Orthodox Tewahedo Church," Jul. 20, 1998. [Online]. Available: <https://www.britannica.com>
- World Council of Churches, "Ethiopian Orthodox Tewahedo Church." [Online]. Available:
<https://www.oikoumene.org>
- CNEWA, "The Ethiopian Orthodox Church." [Online]. Available: <https://cnewa.org>
- Museum of the Bible, "The Ethiopic Orthodox Church," Nov. 1, 2021. [Online]. Available:
<https://www.museumofthebible.org>