

Blockchain Missiology

Enoch Wan & Phillip Metzger

ABSTRACT

Blockchain Missiology is a blend of polycentric missiology and blockchain theory. It values organizational decentralization/distribution over centralization, but some elements require further consideration. Practically, what would it look like to enact a blockchain missiological approach and how does that look different from other approaches? It is relational, and intercultural and values translatability as a means of knowing God and making Him known.

INTRODUCTION

Purpose of the Paper

“Blockchain was created as a response to the trust crisis that swept the world in the wake of the 2008 financial crisis”¹ and it shares similarities with missiology such as basic concepts and implications. The purpose of this paper is to integrate “blockchain” and “missiology” thus the title “blockchain missiology.”

Definition of Key-terms

Blockchain - A blockchain is a type of distributed database or ledger. Blockchain is the technology that enables the existence of cryptocurrency (among other things). A blockchain is a decentralized ledger of all transactions across a peer-to-peer network.

Missiology - “Missiology is an academic discipline aimed at understanding and explaining the specifics of the church’s missionary calling in light of the *missio Dei*. Being biblically based, it is historically informed, theologically balanced, and grounded in particular cultural contexts with the ultimate purpose of directing the practice of the Christian mission in its specific settings.”²

Relational Realism - “Ontologically, “relational realism” is defined as “the systematic understanding that ‘reality’ is primarily based on the ‘vertical relationship’ between God and the created order and secondarily ‘horizontal relationship’ within the created order.” Epistemologically, “relational realism” is to be defined as “the systematic understanding that God is the absolute Truth and the Perfect Knowledge, and only in relationship to HIM is there the possibility of human knowledge and understanding of truth and

reality.”³

Relational Transformation Paradigm – transformational change is to be understood within “relational realism paradigm.”

Transformational change - The dynamism and process of positive change, originated vertically from the Triune-God and ushered in the relational reality horizontally, through the process of interaction between personal Beings (the Triune God) and human beings (at micro and macro levels) multi-dimensionally, i.e. spiritual, moral, social, behavioral dimensions at personal and/or institutional levels – the opposite of transgressional change.⁴

Transgressional Change - Change caused by the dynamism from the enemy of the Triune God and by nature that is contrary to the attribute of God and His will, His revelation in Jesus Christ and the Scripture: the opposite is transformational change.” (Wan & Raibley 2022:7)

Organization of the Paper

This paper will critically assess the potential applications of blockchain in mission by examining its key concepts, such as decentralization, trust, the God protocols, and centralized/decentralized/distributed systems. It will also explore the idea of a fresh approach to mission, informed by the principles of blockchain theory, that values every participant and promotes mutual learning and dialogue.

Theory and Practice of Blockchain

There are several overlapping but relevant definitions for blockchain. A blockchain is a type of distributed database or ledger.⁵ Blockchain is the technology that enables the existence of cryptocurrency (among other things). A blockchain is a decentralized ledger of all transactions across a peer-to-peer network. Using this technology, participants can confirm transactions without a need for a central clearing authority.⁶

A blockchain is “a distributed database that maintains a continuously growing list of ordered records, called blocks.” These blocks “are linked using cryptography. Each block contains a cryptographic

3. Enoch Wan, “The Paradigm of ‘Relational Realism’.” Occasional Bulletin 19, no. 2 (Spring 2006), 1.

4. Enoch Wan, “Relational Transformational Leadership: An Asian Christian Perspective.” Asian Missions Advance, April 2021:2-7.

5. “What Is Blockchain?,” McKinsey & Company, Last modified December 5, 2022, <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-blockchain>.

6. “Making Sense of Bitcoin, Cryptocurrency and Blockchain,” Price Waterhouse Coopers, accessed July 15, 2023, <https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html>.

1. Primavera De Filippi, Morshed Mannan, and Wessel Reijers, “Blockchain as a Confidence Machine: The Problem of Trust & Challenges of Governance,” *Technology in Society* 62 (2020): 101284, doi:10.1016/j.techsoc.2020.101284.

2. A. Kravtsev, “What Is Missiology? By A. Kravtsev - Social Theology,” Social Theology, Last modified December 2012, https://socialtheology.com/docs/What_is_Missiology_An_Introductory_Paper.pdf.

hash of the previous block, a timestamp, and transaction data. A blockchain is a decentralized, distributed, and public digital ledger that is used to record transactions across many computers so that the record cannot be altered retroactively without the alteration of all subsequent blocks and the consensus of the network.⁷

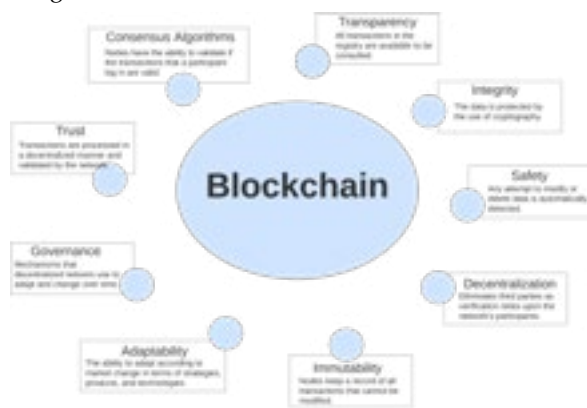
Not without irony, one of the best definitions of blockchain comes from the book *Blockchain for Dummies*. “Blockchain owes its name to the way it stores transaction data—in blocks linked together to form a chain. As the number of transactions grows, so does the blockchain. Blocks record and confirm the time and sequence of transactions, which are then logged into the blockchain, within a discrete network governed by rules agreed to by the network participants. Each block contains a hash (a digital fingerprint or unique identifier), timestamped batches of recent valid transactions, and the hash of the previous block. The previous block hash links the blocks together and prevents any block from being altered or a block being inserted between two existing blocks.”⁸ Below is a brief description of the characteristics of blockchain:

Blockchain characteristics are classified into functional characteristics and emergent characteristics. Functional characteristics are those which are mandatory for functioning, without which the system may not exist or function properly. Functional Characteristics of Blockchain are Decentralized network, Distributed Ledger, Consensus, Immutable (Finality) and Security.

Blockchain Characteristics Transferable to the Practice of Christian Mission

The figure below shows blockchain characteristics transferable to the practice of Christian mission.

Figure 1 – Blockchain Characteristics and Benefits⁹



7. “What Is Blockchain and How Does It Work?,” Synopsys, accessed July 15, 2023, <https://www.synopsys.com/glossary/what-is-blockchain.html#:~:text=Definition,a%20timestamp%2C%20and%20transaction%20data>.

8. “What Is Blockchain and How Does It Work?”

9. This information for this figure was primarily taken from “The landing of Blockchain in port management.” @ <https://piernext.portdebarcelona.cat/en/technology/blockchain-logistics-and-ports-present-and-future/>

Accessed August 24, 2023. There is a characteristic added to the original figure (adaptability.)

Christian Missiology and Polycentric Missiology

Joseph Handley Jr and Allen Yeh have written important books on the topic of distributed/ decentralized leadership. Handley wrote *Polycentric Mission Leadership* and Yeh, *Polycentric Missiology*.

We have chosen to use the term blockchain missiology rather than polycentric, though there are several similar touchpoints. Handley writes,

“I envision a model of leadership that is polycentric, collaborative, taking input from a rich diversity of sources to achieve better and more representative outcomes than the traditional top-down hierarchical or managerial approach to leadership that has been prevalent for decades. Over and above collaboration, decentralized leadership allows for each region of the world and every sector of a company to make decisions that are just in time and appropriate for the local context. In this way, agency is empowered through different centers, allowing better choices to be made that are relevant to the local situation.”¹⁰

Yeh sees the move from monocentric to polycentric as a direct result of world Christianity. “Today, in light of the phenomenon known as world Christianity, the mission is polycentric and polydirectional: “from everyone to everywhere.”¹¹

Mary Lederleitner gave this definition of polycentric missiology in her plenary address at the 14th Global Consultation in Panama for the World Evangelical Alliance in 2016. “Polycentric mission is a holistic perspective and strategy that values multiple centers of power and influence engaged in mission around the globe and actively seeks collaboration with them in ways that address marginalization and prioritizes decision-making shaped by a growing number of diverse voices and perspectives.”¹²

Overcoming marginalization is a high priority for those promoting polycentric leadership and missiology. Yeh emphasizes this in saying that the days of the gospel going from the West to the rest ended when the gospel had been going out from multiple centers since the disciples fled persecution in Jerusalem in Acts 4.

There are other fields of research using the idea of polycentrism including the area of governance. Michael McGinnis defines polycentric and polycentric governance like this: “Polycentric: connotes multiple centres of decision-making authority which are de jure independent or de facto autonomous of each other. Polycentric Governance: governance that has polycentric attributes, where governance is a process by which the repertoire of rules, norms, and strategies that guide behaviour within a given realm of policy

10. Joseph W. Handley, *Polycentric Mission Leadership: Toward a New Theoretical Model for Global Leadership* S.I.: Fortress Press, 2023, 7.

11. Allen L. Yeh, *Polycentric Missiology: Twenty First Century Mission from Everyone to Everywhere* Downers Grove: InterVarsity Press, 2016, 6.

12. Mary Lederleitner, “Plenary Address Polycentric Missiology: the 14th annual Global Consultation in Panama,” October 3-7, 2016.

interactions are formed, applied, interpreted, and reformed.”¹³

This use of polycentric governance is significant in that McGinnis avoids a strict use of the word polycentric since the government is technically connected by one system. If we were to use a strict definition, we would conclude that government can only really be a monocentric or unitary government. In McGinnis’ understanding, polycentric governance shares key attributes of polycentrism while stemming from one government and this is enough to define it as polycentric.

One of the major differences between polycentric missiology and blockchain missiology is in how we define polycentrism. We are using the stricter definition given by Lederleitner where she envisions multiple centers of power, as opposed to the spirit of polycentrism adopted by McGinnis. Both have value, but for the sake of the research, we will use polycentric more literally as multiple centers of power.

Integration of Blockchain and Missiology

The figure below highlights 6 areas and 14 elements where blockchain theory can be integrated into mission. This table highlights elements of blockchain that can provide a fresh perspective on Christian mission.

Blockchain is an immutable database that operates in a decentralized framework. It has unchanging principles with constantly changing methods. As such, blockchain shares many qualities with Christian mission while providing new, fresh language that missiology can benefit from.

Figure 2 Integration Rubric for Christian Mission and Blockchain

Groupings	Elements	Integration of Christian Mission using Blockchain
Community and Relationships	Decentralization	Implement decentralized decision-making structures within mission organizations, involving believers in key positions of leadership and participation using blockchain's decentralized network structure.
Ethics and Accountability	Transparency	Foster transparent communication methods within communities to build trust, mirroring blockchain's transparency that enhances trust in transactions.
Ethics and Accountability	Trust	Cultivate a culture of trust among believers by encouraging reliance on God and mutual support, aligning with blockchain's trust mechanisms and consensus principles.

Groupings	Elements	Integration of Christian Mission using Blockchain
Global Impact and Adaptability	Global Reach	Leverage digital platforms to globally spread the Christian message, paralleling blockchain's global accessibility.
Foundational Principles	Foundation	Blockchain is rooted in immutable, cryptographic principles. Mission is rooted in the Word of God. The principles of both serve as foundational building-blocks. You cannot build blockchain outside of its principles and similarly, Christian mission must remain properly rooted.
Community and Relationships	Network	Foster a supportive network of believers, encouraging a sense of community and shared purpose, like blockchain's network of nodes.
Ethics and Accountability	Validation	Encourage validation and affirmation of beliefs within the community, creating a space for deeper discussions, like validation in blockchain's consensus mechanisms.
Ethics and Accountability	Consensus	Seek consensus on doctrinal matters and mission objectives, fostering a shared understanding, similar to blockchain's consensus mechanisms.
Operational Aspects	Distributed Framework	Apply a distributed approach to mission efforts, involving believers across regions and roles, similar to blockchain's decentralized structure.
Community and Relationships	Relational Nature	Enhance relationships through contextualization to effectively bring the gospel, reflecting blockchain's reliance on relationships for network success.
Operational Aspects	Interdisciplinary	Synthesize various fields like cultural anthropology and theology within mission strategy, akin to the interdisciplinary nature of blockchain's technology.
Operational Aspects	Structure	Employ organizational structures within mission endeavors, analogous to the organized structure required for efficient blockchain networks. Establish organizational structures for mission projects to ensure effective development, governance, and scalability, similar to blockchain's need for structured protocols.

13. Mark Stephan, Graham Marshall, and Michael McGinnis, "An Introduction to Polycentricity and Governance - IU," McGinnis Pages, accessed July 19, 2023, <https://mcginnis.pages.iu.edu/Stephan%20Marshall%20McGinnis%20Intro%20to%20Polyc%20Gov.pdf>.

Groupings	Elements	Integration of Christian Mission using Blockchain
Global Impact and Adaptability	Responsive	Emulate responsiveness in addressing problems through Christian mission, mirroring blockchain's problem-solving nature. Apply blockchain's responsiveness in quickly addressing vulnerabilities and network issues to enhance the effectiveness of Christian mission efforts.
Global Impact and Adaptability	Adaptable	Implement contextualization strategies in Christian mission to adapt to cultural contexts, much like blockchain's continuous adaptation to technological advancements. Employ blockchain's adaptability to evolve mission strategies and technologies, enhancing the scalability and relevance of mission efforts.

Nodes

For the sake of this research, we are limiting nodes to full and partial nodes. There are super nodes and miners, but for the sake of my research, I will not include these. A node is defined as any “device connected to the blockchain.”¹⁴ “The full node is a computer that will have the entire blockchain. The full node is responsible for storing very large amounts of data. This full node has one more task: it verifies the blocks which are being added to the blockchain. So, every time there is a new block, the connected node will pass on the signal to the full node. The full node will then verify the entire blockchain and, once it verifies the node, it will store the block. The second type of node is known as a partial node or light node. For example, let’s say you want to use Bitcoin or any wallet and you want to do that on your mobile phone. Of course, your mobile phone will need to have that software and interestingly, we will call it a node as well because the moment you install the software, your mobile phone becomes a node. But then this will be a partial node because it cannot simply download the entire blockchain.”¹⁵

Blockchain Missiology Analogy

Let us flesh out this whole idea. We will start zooming in and work further and further out. Analogously using blockchain, a partial node represents those who come to Christ through the ministry of a missionary. They carry within them the identity of the “block,” but they don’t need to carry the weight of the full “block.” In this sense, we mean that a new believer is born again, but not necessarily carrying the full DNA of the missional framework

of the church or mission movement. He or she is beginning a new relationship with Christ.

The full node would be the missionary who carries the DNA of the church or mission with him/her as they go out to the world, representing the Lord Jesus Christ and their group. In blockchain, the difference between a full and partial node is clear. A full node carries a complete list of transactions and the partial node only a partial list. Using this analogously, new believers carry in them a new heart in Christ, redeemed to know Jesus. Missionaries are the same. They also carry a new heart in Christ with a hunger to grow and know more of Him, while also carrying the mission of God in the context of their church or mission framework.

The blockchain is the Global Church represented by individual churches around the world. Ultimately, every church that is in Christ Jesus is a block on the chain of the Global Church. We could also see every mission movement and church movement as individualized blockchains within the great Blockchain of the Global Church. In this way, Calvary Chapel¹⁶ is its blockchain, as are the Southern Baptists¹⁷ or CRU.¹⁸

Blockchains serve as guardians of the store information. The digital concept is that by sharing the exact DNA across multiple blocks, the information becomes immutable. Even if one block were to be destroyed or taken offline, the other blocks remain intact.

As churches and mission movements grow, they pass on their DNA. In Acts 2, Jesus told the apostles to be His witnesses in Jerusalem, but not to stop there. They were to be intentional about being His witnesses to the ends of the earth and everywhere in between. As the gospel went out, churches were established as centers and places of discipleship and gospel witness. Using our analogy, churches became (and remain) blocks where nodes get their vision and clarity. The church is a place where the gospel is preached, and the Word of God is declared so that God’s people can grow in their faith and be equipped to do the work of the ministry.

Imagine a piece of paper and on that paper is a visual of the Calvary Chapel Blockchain which shows all their churches, missionaries around the world, and the impact of each of those missionaries in their respective areas. Around the Calvary Chapel Blockchain was a lined box enclosing the entire blockchain. This frame would be the theoretical framework of mission in Calvary Chapel I am proposing in my dissertation. The paper would represent the *missio Dei*. While each blockchain fits within a frame, representing the *missio Dei* within each church or mission movement, the *missio Dei* is greater in scope, purpose, and vision than any one blockchain.

Trust and Interculturalism

14. “Classification and Importance of Nodes in a Blockchain Network,” Seba Bank, accessed July 20, 2023, <https://www.seba.swiss/research/Classification-and-importance-of-nodes-in-a-blockchain-network/>.

15. Jura Protocol Media, “Let’s Talk about Nodes!”

16. For a general understanding and history of Calvary Chapel, see <https://calvarychapel.com/history/>

17. Southern Baptist Convention, <https://www.sbc.net/>.

18. Campus Crusade for Christ International, <https://www.cru.org/>

“Trust can best be understood as a relational attribute between (1) a social actor and other actor(s) (*interpersonal trust*) and/or (2) actors and institutions (*institutional* or *systemic trust*) and (3) institutions and (trusting) actors (*trust as shared expectations*), where institutional frameworks define the nature and strength of trust relationships between different actors.”¹⁹

In the Bible, the word trust is most frequently used in connection to the response of humanity towards God. We are invited to trust God. This kind of trust implies trustworthiness in God. He is worth trusting because He is faithful. Proverbs 3:5, “Trust in the Lord with all your heart, and lean not on your own understanding.” This Hebrew word for trust is more commonly used for confidence or boldness. Trust is not an emotion as much as a response. Trust in the Lord. Why? Because He is worthy and therefore, we can come to Him confidently and boldly. We are not guessing if God is worthy, we are leaning our whole being into His trustworthiness.

We hope it is obvious that the Bible’s understanding of trusting God is not the same as the concept of trust in blockchain. It is important to remember that this protocol was established after the US financial crash of 2008. Blockchain technology was appealing simply because it offered an alternative to the banking crisis of the time. People had lost faith in the financial system and blockchain offered a viable alternative. This alternative was not rooted in the trust of the financial systems’ board of directors. In a blockchain, trust is shared directly between those of the chain.

Trust in the blockchain is not trust per se as much as an alternative to the need for trust. In blockchain, information is shared from blocks to nodes equally and this creates a system that does not rely on institutional or governmental trust. Modern technology allows for large amounts of information to be distributed and shared across multiple blocks, taking away the need for a singular system that holds said information and distributes it at will.

Blockchain trust is established by the fact that each node and block have access to the same transactional history as the rest. There is a relational nature to trust in blockchain that is established by shared information. As an example, those who own Bitcoin are part of a distributed ledger that handles billions of dollars in the form of cryptocurrency. Each node has access to its part of the blockchain. And the blockchain carries within it the whole transactional history of every bitcoin. In this way, those who have Bitcoin share a relational connection with everyone else who has Bitcoin.

Paula Schriefer gives an excellent intercultural definition by contrasting cross-cultural and intercultural. She writes, “In cross-cultural societies, one culture is often considered ‘the norm’ and all other cultures are compared or contrasted to the

19. Moritz Becker and Balázs Bodó, “Trust in Blockchain-Based Systems,” *Internet Policy Review*, Last modified April 20, 2021, <https://policyreview.info/glossary/trust-blockchain>.

dominant culture. Intercultural describes communities in which there is a deep understanding and respect for all cultures.”²⁰

Interculturalism values human connection across a two-way bridge, rather than a one-way bridge. This is a shared trait with Blockchain trust, which operates on similar principles of mutually shared information and value. In missiology, gospel and discipleship contextualization thrive in an intercultural environment. Timothy Tennent prefers the word translatability to contextualization. The gospel must and can be translated culturally and theologically. Tennent defines theological translatability as, “the ability of the kerygmatic essentials of the Christian faith to be discovered and restated within an infinite number of new global contexts.”²¹ As we consider interculturalism, are inclined to see the value of the word translatable over contextualized.

A contextualized method or theology begins from our side of the bridge as we figure out how to cross the bridge to another culture. Translatability begins on both sides of the bridge from the beginning. The God of mission is already at work by His Holy Spirit, making Himself known. The missionary is not the originator of the gospel or discipleship context, they are the physical manifestation of God’s heart and love for the world. As such, the heart of God is not needing to be contextualized. That would be adding an additional step from God to His world, through a missionary.

Since God is already at work everywhere, the need is translatability from God to His world through a missionary. The missionary will have already done the important work of intercultural self-reflection bringing awareness of personal biases, blind spots, and other ethnocentric cultural hindrances. They go out to the world God has called them to and invest in relational equity, learning from the new culture through relationship, and as the Lord opens doors, the missionary translates the heart of God to the people with an awareness of their culture and the one they are intending to reach. This approach to mission is built on mutual trust and respect.

The God Protocols²²

In 1997, Nick Szabo wrote these words. “Imagine the ideal protocol. It would have the most trustworthy third party imaginable – a deity who is on everybody’s side. All the parties would send their inputs to God. God would reliably determine the results and return the outputs. God is the ultimate in confessional discretion, no party would learn anything more about the other parties’ inputs than they could learn

20. Paula Schriefer, “What’s The Difference Between Multi-cultural, Intercultural, And Cross-Cultural Communication?” - Spring Institute”, Spring Institute, Last modified 2016, <https://springinstitute.org/whats-difference-multicultural-intercultural-cross-cultural-communication/>.

21. Timothy Tennent, *Theological Translatability in the New Global Context*, Last modified 2010, https://biblicalstudies.org.uk/pdf/anvii/27-2_020.pdf.

22. Dan White, “The Moment of Disruption & Decentralization.”

from their own inputs and the output.”²³ Szabo was looking for a programmable math god that could facilitate processes involving an exchange of value between multiple independent parties without bias or error. His ideas were ahead of their time in 1997, but not so anymore. The God protocol Szabo described does exist in varying forms across distributed systems.

There is a lot that could be said about the philosophical meaning of the God protocols by Szabo. They share a similar ideology to the blockchain trust factor in that the point is not trust or God. It is a mathematical, digital solution replacing the need for trust or the concept of God. It is a digital Babylon where the need for God is replaced by technological advancement. So why include this in my work?

The mission of God relies solely upon a God of mission whose heart is for the world and who is sovereignly leading His people into their giftings and callings. In this way, His redeemed people share in His mission. Any such God protocol as defined by blockchain is imaginary. It is attempting to connect to the idea of a true and living God who reigns over His creation. While the very nature of the God protocols in the blockchain is anti-God, we are reminded that regardless of whatever system humanity builds, it will always come back to a need for God, even if that God is their ingenuity. In missiology, we lean upon the Triune God who is sovereignly working all things according to His purposes, even when those purposes are unknown to us.

At the foundational level of all healthy, proper missiology is a firm conviction in the immutability of God and His Word. Whether the focus is on theology, praxis, anthropology, ecclesiology, or any other area of missiological research, the Christian must anchor their learning in the God of mission. In missiology, the God protocols remain as they always have since eternity past, rooted in the eternal God who has revealed Himself in the world and through His Word.

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Relational Interactionism is a narrative framework describing the theo-dynamism of the Triune God (personal Beings) who is graciously interacting with the created order (including angelic beings and human being)) in terms of creation and providence as common grace and salvation, sanctification, and glorification of His own as special grace.²⁴

23. Nick Szabo, “The God Protocols,” The God Protocols | Satoshi Nakamoto Institute, Last modified 1997, <https://nakamotoinstitute.org/the-god-protocols/#selection-3.0-7.297>.

24. See Chapter 2 of the publication by Enoch Wan and Jon Raibley. Transformational Change in Christian Ministry. Western Academic Publishers. 2022:9-24.

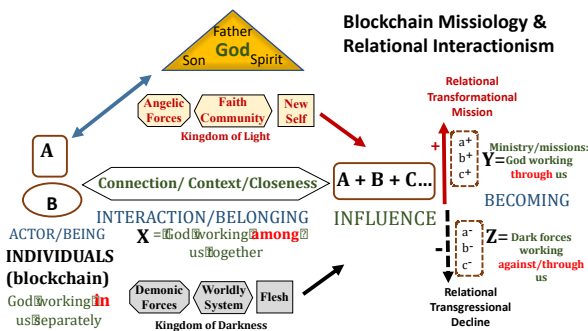
The figure below shows individuals (actor/being) at human level (blockchain state) can experience “God working in us” **individually** (A/ B) and separately in terms of salvation (personal transformational change). Those who are recipients of God’s saving power (individual “**BEING**” with salvation as transformational change), being in Christ they then are children of God, members of the Kingdom and the household of God (“**BELONGING**”). “X” shows the connection/context/closeness where interaction takes place in terms of BELONGING (God working among us). They form the ecclesia and in the **context** of local congregation, they can enjoy **koinonia**, **interacting** with one another in **unity** and shalom. A+B+ others having experienced “God working among us” in the transformational process through the convergence of dynamic interaction of the Trinity (vertically) and Christian *koinonia* (horizontally = God working among us). “Y” (INFLUENCE) shows “A+B+C+Others to be agents/channels of God’s transforming power and grace in terms of “God working through us” and that is the outcome of implementing blockchain missiology.

Figure 3 - Integration Rubric for Christian Mission and Blockchain

Process	Elements	Integration of Christian Mission using Blockchain
INTERACTION/BELONG God working AMONG us	Decentralization: Community and Relationships	Implement decentralized decision-making structures within mission organizations, involving believers in key positions of leadership and participation using blockchain's decentralized network structure.
	Ethics, Accountability & Transparency	Foster transparent communication methods within communities to build trust, mirroring blockchain's transparency that enhances trust in transactions.
	Network	Foster a supportive network of believers, encouraging a sense of community and shared purpose, like blockchain's network of nodes.
	Trust	Cultivate a culture of trust among believers by encouraging reliance on God and mutual support, aligning with blockchain's trust mechanisms and consensus principles.
	Validation	Encourage validation and affirmation of beliefs within the community, creating a space for deeper discussions, like validation in blockchain's consensus mechanisms.
	Consensus	Seek consensus on doctrinal matters and mission objectives, fostering a shared understanding, similar to blockchain's consensus mechanisms.
	Structure	Employ organizational structures within mission endeavors, analogous to the organized structure required for efficient blockchain networks. Establish organizational structures for mission projects to ensure effective development, governance, and scalability, similar to blockchain's need for structured protocols.
	Relational Nature	Enhance relationships through contextualization to effectively bring the gospel, reflecting blockchain's reliance on relationships for network success.
	Distributed Framework	Apply a distributed approach to mission efforts, involving believers across regions and roles, similar to blockchain's decentralized structure.

Process	Elements	Integration of Christian Mission using Blockchain
INTERACTION/BELONGING God working AMONG us	Responsive	Emulate responsiveness in addressing problems through Christian mission, mirroring blockchain's problem-solving nature. Apply blockchain's responsiveness in quickly addressing vulnerabilities and network issues to enhance the effectiveness of Christian mission efforts.
	Adaptable	Implement contextualization strategies in Christian mission to adapt to cultural contexts, much like blockchain's continuous adaptation to technological advancements. Employ blockchain's adaptability to evolve mission strategies and technologies, enhancing the scalability and relevance of mission efforts.
INFLUENCE God working THROUGH	Global Reach	Leverage digital platforms to globally spread the Christian message, paralleling blockchain's global accessibility.
	Responsive	Emulate responsiveness in addressing problems through Christian mission, mirroring blockchain's problem-solving nature. Apply blockchain's responsiveness in quickly addressing vulnerabilities and network issues to enhance the effectiveness of Christian mission efforts.
	Adaptable	Implement contextualization strategies in Christian mission to adapt to cultural contexts, much like blockchain's continuous adaptation to technological advancements. Employ blockchain's adaptability to evolve mission strategies and technologies, enhancing the scalability and relevance of mission efforts.

Figure 4 - Blockchain Missiology and Relational Interactionism



In the figure above, dynamic influence of the kingdom of darkness (i.e. demonic forces, worldly system and the flesh) might have negative impact ("Z" = dark forces working against &/or through Christians individually and collectively (as in the case of church split of a congregation) that led to relational transgressional decline.

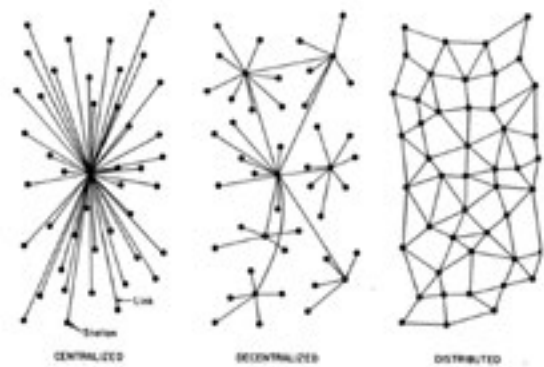
The table above shows the integration of blockchain with Christian mission in X - "interaction" (God working among us) and Y - "influence" (God working through us)

CENTRALIZED, DECENTRALIZED, AND DISTRIBUTED SYSTEMS

It is important to consider the operating framework that drives systems. The development of such frameworks dramatically influences the effectiveness of an organization. The three systems shown in the

figure above represent three of the most common frameworks in blockchain.

Figure 5 Centralized, Decentralized, Distributed²⁵



Centralization

Parikshit Hooda gives great definitions of these three frameworks or systems. "Centralized systems are systems that use client/server architecture where one or more client nodes are directly connected to a central server."²⁶ In organizational structures, centralization is "when a single leader or small group of people makes all decisions."²⁷ There are plenty of pros to this form of leadership and not a few cons. It depends on the business, church, or mission. One of the strengths of centralization is the ease and speed of decision-making. For those mission movements or churches focused on humanitarian aid during natural disasters, centralization can and is a benefit. Decision-making lies in either one or just a few people who can quickly react to the needs. A decentralized or distributed framework would slow the process of aid and possibly cause more harm. On the other hand, that same centralized system can experience limited scalability because it rests on the skillset of the leader or leaders.

We see a clear example of a centralized framework in Exodus. God called Moses to lead the Israelites out of Egypt. Leadership was concentrated on one person, and this ensured that God's message was communicated to Pharaoh through one messenger. This same centralized framework remained effective for communicating direction to the millions of Israelites fleeing Egypt.

Later, when the Israelites were free of Egyptian bondage, that same centralized system became a liability to the growth and health of the people. In Exodus 18, Moses' father-in-law, Jethro visited his

25. Smart Content, "Completing the God Protocols: A Comprehensive Overview of Chainlink in 2021," Medium, Last modified October 21, 2022, <https://smartcontentpublication.medium.com/completing-the-god-protocols-a-comprehensive-overview-of-chainlink-in-2021-746220a0e45>.

26. Parikshit Hooda, "Comparison - Centralized, Decentralized and Distributed systems," GeeksforGeeks, Last modified April 20, 2023, <https://www.geeksforgeeks.org/comparison-centralized-decentralized-and-distributed-systems/>.

27. MasterClass, ed., "Centralization Explained: Pros and Cons of Centralization - 2023," Master Class, Last modified May 9, 2022, <https://www.masterclass.com/articles/centralization>.

family where he witnessed the ineffectiveness of Moses' centralized leadership structure.

"So when Moses' father-in-law saw all that he did for the people, he said, "What is this thing that you are doing for the people? Why do you alone sit, and all the people stand before you from morning until evening?"...So Moses heeded the voice of his father-in-law and did all that he had said. And Moses chose able men out of all Israel, and made them heads over the people: rulers of thousands, rulers of hundreds, rulers of fifties, and rulers of tens. So they judged the people at all times; the hard cases they brought to Moses, but they judged every small case themselves."²⁸

A centralized framework of leadership was not only effective at one time, it was ordained by God, but as circumstances changed, so too the structure needed to change. The impact of that change would bring important growth among the Israelites.

Decentralization

The topic of decentralization extends to multiple spheres of life, from business to governance to cryptocurrency. I will give several different definitions and then use these to create my definition within the context of missiology. The definitions of "decentralization" is informative and helpful:

"Decentralization, or decentralizing governance, refers to the restructuring or reorganization of authority so that there is a system of co-responsibility between institutions of governance at the central, regional, and local levels according to the principle of subsidiarity, thus increasing the overall quality and effectiveness of the system of governance while increasing the authority and capacities of sub-national levels. ..."²⁹

"Decentralization refers to a specific form of organizational structure where the top management delegates decision-making responsibilities and daily operations to middle and lower subordinates. The top management can thus concentrate on making major decisions with greater time abundance. Businesses often feel the requirement of decentralization to continue efficiency in their operation."³⁰

In the above definitions, decentralization is expressed in exclusively positive terms. And while we believe there are figurative and analogous ways to utilize decentralization theory within missiology, there will be heavy limitations. In the Christian mission, ultimate governance comes from the Lord. We believe decentralization theory can provide fresh language to polycentric missiology on the organizational level, but

28. Exodus 18:14-26

29. UNDP, Decentralized Governance Programme: Strengthening Capacity for People-Centered Development, Management Development and Governance Division, Bureau for Development Policy, September 1997, p. 4.

30. "What Is Decentralization?," People Hum, accessed July 15, 2023, <https://www.peoplehum.com/glossary/decentralisation>.

in the end, mission happens from the heart and will of God. This is core to our missiology.

This is an important element of decentralization that we will explore within missiology. As businesses decentralize for the sake of efficiency, so too missiology benefits from a decentralized mindset. As an example, technological advancement has allowed for much better global communication than ever before and this needs to be used in greater ways. Mission praxis does not need to be determined thousands of miles away. Decentralization encourages the elevation of decision-makers around the world.

This next definition comes from the Economist, a British newspaper. They offer a simple but important definition. "Decentralization is the process of distributing power away from the centre of an organization. In the case of a corporation, this usually means divesting authority away from the head office and out to operators in the field."³¹ For decentralization to occur and thrive, those in power will have to relinquish control. This will be the most difficult adjustment in Christian mission, not because Christian leaders are necessarily controlling people. We would suggest that what makes decentralization difficult in mission is not the power dynamic so much as the view that there are not enough viable leaders within any mission movement.

Global leaders are often held to criteria specific to the movement's base culture. They are often expected to know the DNA of their mission movement, as well as the culture of the majority leadership. Most Christian mission leaders want to divest authority but feel hindered by the lack of global leaders who think as they do. This is why we believe that an intercultural approach grounded on the relational realism paradigm by Enoch Wan, is the best approach to modern mission.

The Climate School at Columbia University in New York describes the three major forms of administrative decentralization.³² They are deconcentration, delegation, and devolution. For the sake of this research, we will only discuss delegation.

Delegation is a more extensive form of decentralization. "Through delegation, central governments transfer responsibility for decision-making and administration of public functions to semi-autonomous organizations not wholly controlled by the central government, but ultimately accountable to it...Usually, these organizations have a great deal of discretion in decision-making. They may be exempt from constraints on regular civil service personnel and may be able to charge users directly for services."³³

Delegation may be the most common approach

31. "Decentralisation," The Economist, Last modified October 5, 2009, <https://www.economist.com/news/2009/10/05/decentralisation>.

32. Decentralization Thematic Team, ed., "What Is Decentralization?," Different Forms of Decentralization, accessed July 15, 2023, http://www.ciesin.org/decentralization/English/General/Different_forms.html.

33. Decentralization, "What Is Decentralization?," http://www.ciesin.org/decentralization/English/General/Different_forms.html.

in Christian mission. Authority remains with the governing board and is delegated down to global leaders. The distribution of power is only so much as the governing authority deems. Decentralization is the authority of power given, while delegation is granted authority. Delegation still holds to a central authority but grants others' roles and levels of authority that go with those roles.

The Blockchain Council expresses the importance of decentralization to the blockchain in these ways. It facilitates a trustless system, improves data recovery, reduces the degrees of shortcomings, and it optimizes asset dispersion. "In a decentralized blockchain system, trusting other members is not required. This is because every member in the network has a duplicate or precisely the same information as a disseminated record."³⁴

The value of decentralization in missiology is not decentralization itself but how value can be redistributed among global leaders and churches. Putty Putnam describes the Church as being on a sliding scale between centralization and decentralization. In other words, the Church historically, culturally, and sometimes specifically should be seen on a sliding scale rather than a fixed point of either centralized or decentralized. Putman writes that "over the course of history, the church lives in different places on a centralization-decentralization spectrum at different times and in different contexts."³⁵ He goes on to write about the Church in the West learning towards a centralized system, whereas underground house churches in China lean heavily decentralized. There are several reasons this would be true.

We have to consider the strong Western culture mindset that is both programmatic and individualistic. These fit better with a clear, centralized structure of leadership and organization. On the other hand, the Chinese mindset is relational and community-minded which leans toward a decentralized model. Most significantly, the underground house churches of China exist and can only thrive below the radar of the Chinese government thus a decentralized model is safest. When one house church is shut down, while it must be discouraging, it does not necessarily hurt the other house churches from continued operation.

Dan White writes, "Embracing the decentralized shift is not choosing the opposite of centralization, it is finding the tension that does not stymie and stall movement outside Church walls."³⁶ The challenge in missiology will be to avoid the extremes of one or the other. If a movement has been highly centralized and

sees the need for change, it must avoid the urge to quickly move to the far extreme of decentralization. White describes this as, "reacting against extremes."³⁷

Figure 6 Centralization to Decentralization Linear Scale ³⁸



The COVID-19 pandemic (2020-2022) caused Christian leaders across churches, denominations, and missionary movements to reconsider their organizational structure. Regardless of whether or not their system was centralized or decentralized, there were incredible obstacles to overcome. The pandemic did not force Christian leaders to move their structure along the sliding scale of centralization/decentralization, but it did force them to reconsider the foundation those systems are built on. Can we have church online and still be who we are and faithful to the Lord? What are we willing to give up to keep a solid Christian witness in our community or mission?

Questions like these forced our churches and missionary movements to rethink the foundations of our systems. Can we change became an important question. Not just what can we change, but can we change at all and still be who God has called us to be?

In a sense, it is this foundational thinking we would like to challenge. Missiology will not enter a new era of success by leaving centralization for decentralization. The answer is not one or the other. For that matter, it is good to remember that mission exists because we serve a missionary God. Different systems of organizational leadership are neither the answer nor the problem. An intercultural, relational approach will force us to reconsider our foundational systems and adjust according to God's Spirit and what makes the most sense in a global context.

Distribution

"A distributed system is a collection of computer programs that utilize computational resources across multiple, separate computation nodes to achieve a common, shared goal."³⁹ Distributed systems have the potential to be a positive medium between centralized and decentralized systems. In a distributed system "the processing is shared across multiple nodes, but

34. Anshika Bhalla, "What Is Decentralization in Blockchain?," Blockchain, AI & Web3 Certifications, Last modified December 13, 2022, <https://www.blockchain-council.org/blockchain/what-is-decentralization-in-blockchain/>.

35. Putty Putnam, "Centralization, Decentralization and the Future Church," Centralization, Decentralization and the Future Church, Last modified November 2, 2020, <https://www.puttyputnam.com/post/centralization-decentralization-and-the-future-church>.

36. Embracing the Decentralized shift is not choosing the opposite of Centralization, it is finding the tension that does not stymie and stall movement outside Church walls.

37. Dan White, "The Moment of Disruption & Decentralization," V3 Movement, Last modified August 25, 2020, <https://thev3movement.org/2020/08/27/the-moment-of-disruption-decentralization/>.

38. Decentralization Thematic Team, ed., "What Is Decentralization?," Different Forms of Decentralization, accessed July 15, 2023, http://www.ciesin.org/decentralization/English/General/Different_forms.html.

39. Hooda, "Comparison - Centralized, Decentralized and Distributed Systems."

the decisions may still be centralized.”⁴⁰

In Exodus 18, Moses appoints other men to lead. He gives them authority while still retaining leadership so in this way we see a distributed system. It is not fully centralized anymore in the person of Moses, but it is not fully decentralized across all other leaders. There is common DNA seen in the qualifications required to be a leader, but a submission to the authority of Moses still exists. Authority was distributed and, in this way, true responsibility was passed to these men to lead and oversee disputes among the people. There are elements of centralization and decentralization while leaning heavier towards practical decentralization.

“Distributed governance is the specification of principles and methods which enable scalable coordination for forming consensus and to legitimate decisions. In such systems, all participants are treated equally without the presence of a central actor in the hierarchy. They are scalable, so efficiency is not reduced but steady or increased by an increasing number of participants.”⁴¹ The value of a distributed system for churches or mission movements is that the Word of God, the Holy Spirit, the *missio Dei*, and whatever specific theological and practical issues exist can serve as the guiding principles for decision-making.

This is different than a fully decentralized church where consensus cannot matter. And it is different than a centralized system that places one or multiple people in total authority. Distributed governance lets the principles guide leadership so that it is scalable. Ultimately, the Church is centralized if we consider the Triune God as the Supreme Leader of His Church. Beyond His leadership, the Church can and should operate from a distributed framework where God’s Word, Spirit, and will guide our steps.

Vitalik Buterin created the second most popular cryptocurrency, Ethereum. He wrote this about distributed governance. “Instead of a hierarchical structure managed by a set of humans interacting in person and controlling property via the legal system, a decentralized organization involves a set of humans interacting with each other according to a protocol specified in code and enforced on the blockchain.”⁴²

This is an area of ecclesiology that missiologists should further explore. Are there other examples of distributed governance like in Exodus 18 or Acts 6? When Paul exhorts Timothy and Titus to establish elders in the churches, is he centralizing leadership around himself, decentralizing it across the churches, or distributing leadership under the guidance and

40. Mari Eagar, “What Is the Difference between Decentralized and Distributed Systems?,” Medium, Last modified November 4, 2017, <https://medium.com/distributed-economy/what-is-the-difference-between-decentralized-and-distributed-systems-f4190a5c6462>.

41. Max Semenchuk, “What Is Distributed Governance?,” Medium, Last modified October 30, 2020, <https://medium.com/dgov/what-is-distributed-governance-3b103eb082c0>.

42. Sholto Macpherson, “Dao: What Directors Need to Know,” AICD, Last modified December 14, 2021, <https://www.aicd.com.au/finance-governance/financial-reporting/standards/dao-what-directors-need-to-know.html>.

leadership of the Holy Spirit.

CONCLUSION

We have sought to define blockchain terminology by showing concepts that apply to missiology. David Bosch believed that the world was entering into a postmodern paradigm⁴³ and into that new paradigm, missiologists will need new terminology and models. We believe that emerging blockchain technology can provide a fresh approach for missiologists to consider, therefore, in this exploratory study we propose blockchain missiology.

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43. Parikshit Hooda, “Comparison - Centralized, Decentralized and Distributed systemsParikshit,” *GeeksforGeeks*, Last modified April 20, 2023, <https://www.geeksforgeeks.org/comparison-centralized-decentralized-and-distributed-systems/>, 349.

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