



Creating a Dogmatic Theology based on General Systems Theory

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DEDICATION

I dedicate this to my family: Kirsten, Harper, and Thomas.

ABSTRACT

This research concerns the composition of a whole Dogmatic Theology, strictly according to the 10 irreducible properties of all open systems. The paradox faced by theologians is that the orthodox dogma of the Triune God, developed and defended in the creeds, articulates that He is a **simple** Being and therefore not composed of parts. All scientists¹ (of which theologians are a particular kind) are preferred to interpret reality holistically, rather than reductively, by using concepts provided in the systems paradigm. However, if all we experience is composite systems and God is **not composite** then how do we properly understand Him and correctly articulate and defend the dogma concerning His Being (*ousia*) and Persons (*hypóstases*)? Conversely, what results when we apply systems categories to the dogma of *creatio ex nihilo* (creation from nothing)? The central theoretical argument of this study is that a whole Dogmatic Theology can be composed using the 10 irreducible properties of General Systems Theory to organise the conceptual dogmatic 'parts'.

Key terms

General Systems Theory, Cybernetics, Systems thinking, Measures of performance, General control problems, Authoritative divine direction, *Ousia*, *Hypostases*, Independence, Dependence, Interdependence.

¹ This refers to all 'Traditional' scientists as opposed to 'Postmodern' scientists. Some presuppositions of traditional science are: an external world exists; nature is understandable; the rules of logic are valid; language is adequate to describe the natural realm; human senses are reliable; mathematical rules are descriptive for the physical world; unexplained things can be used to explain other phenomenon; observable phenomenon provide knowledge about unobservable phenomenon (e.g., cosmic background radiation provides insight into the Big Bang). <https://dwellcc.org/learning/essays/postmodern-critique-science>

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CHAPTER 1 INTRODUCTION

1.1 Background

I became interested in General Systems Theory (GST) while watching a series of Youtube videos teaching the fundamentals of systems thinking. One of the videos gave an overview of the history of systems thinking in the western world. According to this narrative GST provided a liberating secular alternative to 'religious' oppressive teaching coming from 'the Church' in history. GST promises the thinking world a healthy, holistic account for all of life for anyone, religious or not.

This sounded like a gross generalisation to me since I had already sensed some systems concepts expressed in the New Testament, mostly with the descriptions of unity-in-diversity as found in the epistles of Paul, which described the people of God with organic terms like the 'body' (Eph. 4:12) and architectural terms like the 'temple' (1 Cor. 3:16-17). In Ephesians 4 Paul clearly sees the entire Christian community as a functioning unit, an interdependent and interrelated organism composed of individual Christians: this is systems thinking.

It made me seek out more information on this way of interpreting composite reality. It seemed too good to be true and I wondered if it might somehow apply to Dogmatic Theology as well: could a whole Dogmatic Theology be composed using General Systems Theory?

GST provides us with the ultimate tool for a holistic description of reality. 'Systems science... has its specific point of view: to understand man and his environment as part of interacting systems. The aim is to study this interaction from multiple perspectives, holistically. Inherent to this approach is a comprehensive historical, contemporary, and futuristic outlook' (Skyttner, 2005:3).

Although systems thinking can be found in ancient sources, like Aristotle, as well as in some holistic thinkers in the first half of the twentieth century, like Jan Smuts, these are not part of the tradition which 'is explicitly self-identified as systems thinking'. Instead, the tradition is said to commence with 'the explicit statements of GST (General Systems Theory) and cybernetics by von Bertalanffy and Wiener...' (Ramage & Shipp, 2009:3). Although GST seems somewhat recent then, it does not completely exclude the complex concepts found in the ancient texts we call 'Bible' or 'Scriptures' or 'Canon'.

The Dogmatic Theology of the Church is creedal, and the creeds are the distilled teachings of the Scriptures, especially focused on the Trinity, Christology, Pneumatology, and the Church. As Bray (2009:62) notes, "Dogmatics is the study of the fundamental principles on which the teaching of Scripture is based, and **which are necessary for a proper understanding of God's plan of salvation in Christ**".

Bray also says, 'The most fundamental attribute of God's being is its simplicity.... God is not a compound. If he were, he would not be the ultimate being. His parts would all be logically prior to him.... Divine simplicity means that whatever we say about God applies to the totality of his being' (2021:26, 27). If God is simple and not compound, how can we describe him? If all we know is composite systems, how do we structure knowledge concerning a simple Being, God?

Skyttner (2005:53-54) has summarised the entire systems paradigm tradition and distilled it to an exhaustive and useful list of properties for all open systems. "A system is an arrangement of parts or elements that together exhibit behaviour or meaning that the individual constituents do not",² He also says, "An open system (all living systems) is always dependent upon an environment with which it can exchange matter, energy, and information. Its main characteristic is its organisation which is controlled by information and fuelled by some form of energy. Additional qualities are that they are selective and within certain limits, self-regulating" (Skyttner, 2005:62).

In other words, all open systems (whether concrete/physical, conceptual, abstract, or unperceivable (59)) will show the same 10 properties. These irreducible properties of all open systems are:

1. Interrelationship and interdependency of objects and their attributes
2. Holism
3. Goal-seeking
4. Transformation
5. Inputs and outputs
6. Entropy
7. Regulation
8. Hierarchy
9. Differentiation

² INCOSE 2022 <https://www.incose.org/about-systems-engineering/system-and-se-definition/general-system-definition>

10. Equifinality and multifinality

So, no matter what open system is under investigation (and there are many more sub-categories) it must bear these 10 properties.

Skyttner (2005:53) states that nowadays "there is near total agreement on which properties together comprise a general systems theory of open system". Skyttner (54) states that GST is part of the broader **systems paradigm** and supplements all scientific thinking. How can it be used to compose a whole Dogmatic Theology?

Carter (2018:53) articulates classical theism by saying that "all existing things fall into one of two categories: (1) God, who has existence as part of his essence and cannot not exist; and (2) all things that are not part of God, which have existence not in themselves, but only as God upholds them in existence". This is a concise summary of all Christian knowledge of reality found in classical theism: The uncomposed Composer and everything He composes.

A third idea, although not a dogma, is relevant which is '*perichoresis*' or '*circumincessio*' or 'indwelling' which enables us to understand and articulate how the nature of the necessary, simple Composer and the nature of all contingent, composite entities are in relations.

Perichoresis is found in the dogma of Trinity (the three Persons), the doctrine of the hypostatic union (how the divine and human natures relate) in the dogma of the incarnated Christ and in the 'participation' in the divine nature found in the dogma of soteriology (Twombly, 2015:5).

So, to reiterate, classical theism is a holistic description of God, all of creation and the primary perichoretic relationships which exist in three situations: internal to God's Being, between the natures in the Person of Christ, and the human participating in the divine nature in salvation.

Bavinck (2003:46) defines dogmatics as "a normative science (Dutch: *wetenschap*) that prescribes what we must believe". It is therefore a stricter system than systematic theology in that it seeks to construct what Christians should believe historically, creedally, and biblically. But does Dogmatic Theology present all Skyttner's 10 categories? I suspect this to be so. Will a whole Dogmatic Theology function with all 10 properties of an open conceptual system? Is it possible that Dogmatic Theology already shows an underlying pattern of open systems thinking?

As already stated, dogmatics is a whole creedal enterprise, derived from Scripture, made of 'parts', that is 'dogmas', and it is assumed that these dogmas are somehow related and interdependent. If you remove any dogma from Dogmatic Theology, the whole of dogmatics

will not function as a system. For example, if you take away the dogma of the Trinity, Dogmatic Theology loses its central axiom.

Similarly, with the other Nicene Orthodoxy focus of Christology, if we do not articulate the hypostatic union correctly, we immediately fall into the various Christological heresies like those teaching on the nature of Christ (Arianism and Docetism) and the relationship of Christ's two natures (Nestorianism and Eutychianism) (Galan, 2015:13).

With seemingly 'lesser' dogmas, like the dogma of *creatio ex nihilo*, not properly articulating it will result in jeopardising the fundamental Creator-creature distinction. So, Dogmatic Theology can be assembled as a whole **system** with a hierarchy of dogmas organised, part-like, in interdependent and interrelated ways. If we use GST to structure Dogmatic Theology, we will have a holistic and comprehensive system which will function as God intended: as a system to purify and edify humanity.

1.2 Problem statement

God is simple, which means He has no parts.³ The Athanasian Creed, for example, emphasises this in terms of 'unity': "Now, the catholic faith is this, that we worship one God in Trinity, and Trinity in Unity, neither confusing the Persons nor dividing the divine Being" (Bray, 1997:209). However, everything humans know is composite and made of parts (including our language system necessary for describing reality).

So, all Dogmatic Theology is a composite way of articulating reality, including essential and relational attributes of the non-composite being, called YHWH, and the most comprehensive tool for studying composite objects is the **systems paradigm**. It has been found useful in all kinds of knowledge systems. Can it be found useful in composing a Christian theology?

In the light of this paradoxical situation, the question is: **How can General Systems Theory (GST) be used to compose a whole Dogmatic Theology?**

Questions arising from this problem:

- What are the 10 irreducible properties of all open systems that are found in General Systems Theory?

³ 'The Lord our God is but one only living and true God... without body, parts, or passions' <https://www.the1689confession.com/1689/chapter-2>.

- What are the major dogmatic 'conceptual parts' that in relationship will compose a whole Dogmatic Theology?
- What happens when we apply the 10 irreducible properties of all open systems to the dogma of *theologia* - the doctrine of the Triune God?
- What happens when we apply the 10 irreducible properties of all open systems to the dogma of *creatio ex nihilo* - the doctrine of creation out of nothing?
- How can General Systems Theory be used to compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' considering the 10 irreducible properties of all open systems?

1.3 Research aim and objectives

1.3.1 Research aim

The main aim of this study is to compose a whole Dogmatic Theology by using General Systems Theory, i.e., by applying the 10 irreducible conceptual categories to the dogmatic 'parts'.

1.3.2 Research objectives

The specific objectives of this study are to:

- outline and summarise the 10 irreducible properties of all open systems that are found in General Systems Theory;
- outline the major dogmatic 'conceptual parts' that in relationship will compose a whole Dogmatic Theology;
- observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *theologia* - the doctrine of the Triune God;
- observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *creatio ex nihilo* - the doctrine of the Triune God;

- compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' considering the 10 irreducible properties of all open systems.

1.4 Research methodology

The dogmatic study will be done from a reformed perspective in the following way. The following methods are used to answer the various research questions:

To outline and summarise the 10 irreducible properties of all open systems found in General Systems Theory, a literature analysis is to be conducted of General Systems Theory by Lars Skyttner, and other related literature. This will provide the basic systems categories in a theological system to synthesise the doctrines of *theologia* and *creatio ex nihilo*⁴ with the properties of systems.

To outline the major dogmatic 'conceptual parts' that in relationship compose a whole Dogmatic Theology, a literature analysis is to be conducted to discover and describe both the doctrine of *theologia* and the doctrine of *creatio ex nihilo* in detail. This is to analyse and then evaluate the doctrines as systems and to compare the attributes of the doctrines to one another.

To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *theologia* - the doctrine of the Triune God - a synthetic dogma in the General Systems Theory model will be outlined and evaluated.

To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *creatio ex nihilo* - the doctrine of creation out of nothing - a synthetic dogma in the General Systems Theory model will be outlined and evaluated.

⁴ It may seem reductionistic but I was trying to limit myself to the only two creedal Greek terms in order to conclude the "bare minimum" of the Creator and then the Creation. I found using the systems thinking categories did not fail on any of these pursuits and provided a neat minimalist outline for the systems thinking, whether Christian or not. Moreover, I believe these terms are concepts found throughout the whole process of Natural Theology, Exegesis, Biblical Theology (supplemented by Historical Theology, and Systematic or Dogmatic Theology.

To compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' considering the 10 irreducible properties of all open systems, a holistic model will be presented which clearly and exhaustively synthesises the dogmatic conceptual parts into an open conceptual system.

1.5 Concept clarification

1.5.1 Dogma

This is a systematic doctrine developed by the church considering the teachings of all Scripture. "A dogma is a faith-proposition that claims to be true and demands universal recognition" (Bavinck, 2003:46).

1.5.2 Conceptual System

A conceptual system is a system that is made up of concepts. It is composed of organised ideas which are portrayed in symbols. The units within conceptual systems can be verbal, numerical, or any symbolic convention.

1.5.3 *Theologia*

Theology or, the doctrine of God, proper. "The scholastics generally defined *theologia* as *sermo vel ratio de Deo*, a word or rational discourse concerning God, and therefore as human wisdom or knowledge concerning God" (Muller, 2017:357).

1.6 Ethical considerations

This is a literature study that does not involve humans or animals. The ethical risk is minimal.

1.7 Provisional classification of chapters

1. Introduction
2. The Conceptual 'Parts' of Dogmatic Theology
3. Skyttner's 10 Irreducible Properties of an Open System

4. Theologia: Dogmatic Conceptual Part 1

5. Creatio ex Nihilo: Dogmatic Conceptual Part 2

6. Summary and Conclusion: Whole Dogmatic System

1.8 Schematic presentation

Research question	Aim and objectives	Research method
How can General Systems Theory (GST) be used to compose a whole Dogmatic Theology?	The main aim of this study is to compose a whole Dogmatic Theology by using General Systems Theory, i.e., by applying the 10 irreducible conceptual categories to the dogmatic 'parts'.	The dogmatic study will be conducted from a reformed perspective.
What are the 10 irreducible properties of all open systems? that are found in General Systems Theory?	To outline and summarise the 10 irreducible properties of all open systems that are found in General Systems Theory.	To outline and summarise the 10 irreducible properties of all open systems found in General Systems Theory, a literature analysis is to be conducted of General Systems Theory by Lars Skyttner, and other related literature. This will provide the basic systems categories in a theological to synthesise the doctrines of <i>theologia</i> and <i>creatio ex nihilo</i> with the properties of systems.
What are the major dogmatic 'conceptual parts' that in relationship will compose a whole Dogmatic Theology?	To outline the major dogmatic 'conceptual parts' that in relationship will compose a whole Dogmatic Theology.	To outline the major dogmatic 'conceptual parts' that in relationship compose a whole Dogmatic Theology, a literature analysis is to be conducted to discover and describe both the doctrine of <i>theologia</i> and the doctrine of <i>creatio ex nihilo</i> in detail. This is to analyse and then evaluate the doctrines as systems and to compare the attributes of the doctrines to one another.
What happens when we apply the 10 irreducible properties of all open systems to the dogma of	To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of <i>theologia</i> - the	To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of <i>theologia</i> - the doctrine of the Triune God - a synthetic dogma

<i>theologia</i> - the doctrine of the Triune God?	doctrine of the Triune God.	in the General Systems Theory model will be outlined and evaluated.
What happens when we apply the 10 irreducible properties of all open systems to the dogma of <i>creatio ex nihilo</i> - the doctrine of creation out of nothing?	To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of <i>creatio ex nihilo</i> - the doctrine of the Triune God.	To observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of <i>creatio ex nihilo</i> - the doctrine of creation out of nothing - a synthetic dogma in the General Systems Theory model will be outlined and evaluated.
How can General Systems Theory be used to compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' considering the 10 irreducible properties of all open systems?	To compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' in light of the 10 irreducible properties of all open systems.	To compose a whole Dogmatic Theology, using conceptual dogmatic 'parts' considering the 10 irreducible properties of all open systems, a holistic model will be presented which clearly and exhaustively synthesises the dogmatic conceptual parts into an open conceptual system.

CHAPTER 2 SUMMARY OF GENERAL SYSTEMS THEORY (GST)

To engineer a whole conceptual system model of dogmatic theology, we would benefit by first starting with a very clear and thorough summary of General Systems Theory (GST).

This chapter will give an overview of what has been called the system principle, system thinking and General Systems Theory. Lastly, we will give an overview of Skyttner's 10 irreducible properties of open systems in the hope of providing a useful conceptual scaffolding on which to build our dogmatic theology.

2.1 The system principle

What is a **system**? This can be answered from simple to complex. For now, let it suffice that the characteristic of all systems is that "the whole is greater than the sum of its parts" (Skyttner, 2005:69). This is called the system principle and includes the system's emergent properties, also called the synergetic effects.

Emergence is defined as "the creation of new organized wholes which forces their subsystem to obey a set of critical boundary-conditions" (Skyttner, 2005:69). Midgley notes that "An emergent property is one that results from the interaction of a system as a whole rather than from one or two of its parts in isolation" and thus is core to systems thinking (Midgley, 2000:40-41). The concept is the opposite of analytical reductionism 40). Emergence can also be understood as a **design pattern or downward causation**. Emergent properties disappear when the whole system decomposes into its components. Skyttner (2005:40) notes that "The process of **emergence** results from the interaction of independent parts when they stop being independent and start to influence each other."

So, we see here a threefold theme that will arise repeatedly in systems thinking when discussing the whole functional system:

1. **Independence** of parts is not desirable.
2. Unidirectional **dependence** of a part on another part is not desirable.
3. **Interdependence** of parts on one another is desirable.

2.1.1 The system

A system is an arrangement of parts or elements that together exhibit behaviour or meaning that the individual constituents do not⁵.

Skyttner (2005:57) further defines the **system** as, "a set of interacting units or elements that form an integrated whole intended to perform some function" and so a system is a structure with consistency over time: it always exhibits order, pattern, and purpose. (The system's purpose that is, *teleology*) is the reason it exists and that is how to measure its functional success. It is identified by its behaviour. Unlike a goal or objective, a system's purpose is relentlessly pursued but is unattainable (Checkland, 1991:316).

Skyttner (2005:58) summarises Ackoff's scientific definition of the system as satisfying three behavioural conditions:

1. Behaviour of each element effects the behaviour of the **whole**.
2. Behaviour of elements, and their effects on the whole, are **interdependent**.
3. However, the subgroups of the elements are formed, all have an effect on the behaviour of the whole: none has an **independent** effect on it.

Skyttner (2005:59) highlights the necessity of "functional division and co-ordination of labour among the parts" for a system to be recognised: the components are assembled with thoughtful consideration. Systems (which holistically manifest emergent properties) are either natural (Checkland, 1991:315) or crafted by the intelligent intentions of human beings. Skyttner (2005:59) notes that in addition to exhibiting organisation to qualify as a system two other attributes must be present:

1. Continuity of **identity** (i.e., preservation of structure amid change).⁶
2. **Goal-directedness** (i.e., *function*).⁷

At this point the systems' definitions can seem somewhat dizzying, but it is important to have a working knowledge of the overall ideas to proceed further.

⁵ INCOSE 2022 <https://www.incose.org/about-systems-engineering/system-and-se-definition/general-system-definition>

⁶'the property of long-run stability which enables the system to recover stability from some degree of disturbance' (Checkland, 1991:313).

⁷All systems are *purposive* or goal-directed (Checkland, 1991:317).

Is every composite object a system? Kramer and de Smit (1977:13) distinguish between **system** and **aggregate**. They note that an aggregate is a collection of entities with no relation to the whole. Likewise, Skyttner (2005:58) in critiquing Klir's overly general system definition, states, "a set of elements, all of which do the same thing, forms an aggregate, not a system".

In the coming chapters we will be constructing a whole dogmatic theology conceptual system. It is my experience and conviction that dogmatic theology is not an aggregate (where all the dogmas and doctrines would have no relation to the whole or having the same conceptual function). I expect to find continuity of identity through preservation of identity and functional goal-directedness. I also expect to perceive Dogmatic Theology divided into various functional units that are coordinated to work together as a unit, intelligently assembled with resultant emergent properties. I finally expect to see order, pattern, and purpose with a threefold theme of:

1. Maximising dogmatic interdependence,
2. Minimising dogmatic independence and
3. Minimising dogmatic unidirectional dependence.⁸

2.1.2 System structure

Skyttner (2005:59) defines the structure of a system as "the arrangement of its subsystems and components in three-dimensional space at a certain moment in time." When it comes to the structure of a system, Kramer and de Smit (1977:20) note three necessary properties:

1. the set of relations;
2. the positional value;
3. the dimensional domain.

Kramer and de Smit (1977:21) note that these respectively refer to, "the existence of the relations between the entities...the arrangement of the entities, their position as related to one

⁸Dogmatic theology is, at its core, creedal and thus a systematised distillation of the teaching of Scripture. It is a formalised statement of the Christian worldview which, according to Anderson *et al.* (2017:75), is required to exhibit internal consistency (correspondence theory of truth), external consistency (coherence theory of truth) and existential consistency (pragmatic view of truth). Worldview, from a GST perspective, is composed of axioms (Skyttner, 2005:96-97). So, dogmatic theology is an axiomatic grand paradigm, formally composing the Christian worldview. Any dogma is an axiom ("impossible to prove or deduce from something else, but is a starting point for... (a) hierarchy of scientific abstractions..." (Skyttner 2005:97)) distilled from the creeds, distilled from Scripture.

another within the system as a whole" and that, "A system must have dimensions". Kramer and de Smit (1977:22) show how these properties of all systems are useful when distinguishing between an aggregate and a system. With an aggregate there may be, for example, no 'positional value' in the relations between some elements and no relation to the whole. Although we will not be engineering a physical or concrete system, conceptual systems must exist within a concrete system as Skyttner (2005:61) asserts.

2.1.3 Open and closed systems

There are two categories of system: **open and closed**. Mesarovic (1963:9) states, "In dealing with an open system, one is confronted with a completely different situation than when dealing with a closed system."

Kramer and de Smit (1977:30) distinguish between a closed system and an open system. The closed system does not interact with or is not regarded as interacting with its environment. In a sense the environment "does not exist" with a closed system. A closed system example would be the biosphere which does not interact with the space surrounding it (Skyttner, 2005:63). So, to the biosphere "space does not exist".

The open system, therefore, interacts with or is regarded as interacting with its environment. In an open system, "at least one entity in the system influences the state of an entity in the environment or vice versa" (Kramer & de Smit, 1977:34). Midgley defines the **open system** as, "one which assimilates inputs from its environment, and excretes waste products, in order to maintain its identity." He adds that open systems "are teleological: they are purposive, adaptive and/or goal-directed (2000:46)."

Mesarovic (1963:9) outlines three typical open systems:

1. A system which is not completely isolated from its environment (the system has "disturbances" or uncertainties).
2. A system which responds to the experimentation in such a way as to cause permanent changes in its behaviour (adaptive or self-organizing systems).
3. A system with which the experimenter is interacting, i.e., while influencing the system he is, at the same time, influenced by it. The experimenter is "inside" rather than "outside" of the system during experimentation.

Skyttner (2005:62) states that:

An open system... is always dependent upon an environment with which it can exchange matter, energy and information. Its main characteristic is its organisation which is controlled by information and fuelled by some form of energy. Other qualities are that they are selective and within certain limits, self-regulating.

All living systems are open (Skyttner, 2005:62) and dependent on the relevant environment. The open system exchanges matter, energy, and information with the environment. The main characteristic of the open system is its organization which is controlled by information and fuelled by some form of energy. Open systems are also selective and somewhat self-regulating and so, "More complex systems move toward growth and expansion when they tend to import more matter and energy than is required for the output".

For the present study we will exclude closed systems and will only be using an open system for modelling the conceptual dogmatic theology system. The two-fold justification for this is firstly, that almost all systems are open systems and secondly, according to the Christian worldview there are only two categories of being: uncreated Creator and *creatio ex nihilo*. In this worldview the whole creation is a system continually open to divine intervention. The written word of God (which is called "living" in Hebrews 4:12 and "breathed out" in 2 Timothy 3:16-17), distilled in the creeds, unpacked over time in dogmatic theology, is an open system.

2.1.4 System boundary/enviromed⁹

From this distinction between closed and open systems, Kramer and de Smit explain the concept of a **system boundary**. They (1977:31) note that a system boundary is in fact quite difficult to locate. It is mostly determined by criteria which the elements will have to fulfil to be considered part of the system. Checkland (1991:312) defines the system boundary as:

The area within which the decision-making process of the system has power to make things happen, or prevent them from happening. More generally, a boundary is a distinction made by an observer which marks the difference between an entity he takes to be a system and its environment.

Why identify the system boundary? To perceive a system's environment, its boundary/enviromed must be identified. Checkland (1991:314) defines the environment as that which "lies outside the system boundary" and so, "(t)he boundary surrounds the system in

⁹ Enviromed means "surrounded" or "enclosed". All systems, open or closed, are surrounded or enclosed.

such a way that the intensity of interactions across this line is less than that occurring within the system” (Skyttner, 2005:64).

Crossing a boundary usually requires transformation or conversion. When it comes to information, the boundary will possess a coding and decoding property. This means that the output is usually not identical to the input. Interface is necessary for when systems do not interact boundary to boundary (Skyttner, 2005:65). In constructing the dogmatic theology conceptual model, we will be utilising the concept of a system boundary as it pertains to conceptual systems modelling creation.

2.1.5 System behaviour

A system’s behaviour is only observable by the system’s output (Kramer & de Smit, 1977:38). Mesarovic (1963:17) defines the behaviour of a system as, “a set of systems attributes”. Drenick (1963:157-158) notes that all physical systems are causal, “That is to say, the output of such a system at any one time can depend only on the input up to and including that time but not on the input beyond that time”. A conceptual, axiomatic dogmatic theology system, although it is not physical, will exhibit behaviour as well, since it has output: orthodoxy (in the form of a whole Christian theism worldview), orthokardia, and orthopraxy.

2.1.6 General properties of open systems

Since we are concerned only with open systems, let us look at the broad property list of open systems. Summarising Katz and Kahn, Skyttner (2005:63) lists the following 10 general properties of an **open system**:

1. Importation of energy
2. The throughput
3. The output
4. Cycles of events
5. Negative entropy (negentropy)
6. Information input and the coding process
7. Equilibrium and dynamic homeostasis including adaptation
8. Differentiation (elaboration, complexification)

9. Integration and coordination

10. Equifinality¹⁰

These provide an excellent albeit limited overview of the properties of open systems. To engineer a system model for dogmatic theology, we prefer Skyttner's master list of system attributes.

2.2 Systems thinking

GST and cybernetics are the two foundational traditions of **systems thinking**. Although systems thinking can be found in ancient sources, like Aristotle, as well as in some holistic thinkers in the first half of the twentieth century, like Jan Smuts, these are not part of the tradition which "is explicitly self-identified as systems thinking" (Ramage & Shipp 2009:3). Instead, the tradition is said to commence with "the explicit statements of GST and cybernetics by von Bertalanffy and Wiener" (Ramage & Shipp, 2009:3). Kramer and de Smit (1977:5) define systems thinking as a way of approaching problems which follows from two premises:

1. Reality is regarded in terms of wholes or "*gestalten*".
2. The environment of open systems, and their interaction with said environment, is regarded as essential.

Systems thinking is an epistemology based on two pairs of basic ideas necessary for modelling systems:

1. Emergence¹¹, and
2. Hierarchy.

also

3. Communication, and
4. Control (Checkland, 1991:318).

Kramer and de Smit (1977:23) note that when it comes to systems thinking, in order to analyse a system, we have to observe the entity, relation, and structure. It may be that this way of

¹⁰We will outline the fuller version of these concepts later in this chapter.

¹¹Checkland highlights how this property is the crucial characteristic of natural or designed systems (1991:318).

thinking is simply a more holistic way of “attending to reality”. Attending to reality or **the world** is what the human brain does naturally and continually.

McGilchrist (2009:43) notes that the different hemispheres of the brain attend to reality differently. The right hemisphere is responsible for global attention while the left hemisphere is responsible for local attention. In other words, the right brain looks at the whole of the system and the left brain looks at the parts.

The systems thinker then, is concerned with the integration of the two ways of attending to reality. Neither should dominate, both should be always present. He refers to this as hierarchy of attention. System thinking is therefore attending to reality with both hemispheres.

In addition to this the whole system’s behaviour must be understood which is known as the system’s state. Kramer and de Smit (1977:23) provide a definition of state which emphasises its dynamic character: “The state of a system, containing the information on the system’s earlier history and its present condition, is necessary and sufficient for predicting the output or the probability of a certain output, giving a certain input”. Mesarovic (1963:17) states, “The three terms of the triadic relation are...input, output, and state”. The state is important when understanding a system’s dynamic behaviour: when we have the input and the state of a system, we can predict the output.

2.2.1 Order

Boulding notes that a general systems thinker has “rage for order”. Order is synonymous with regularity and **nonrandomness** and is opposed in principle to chaos and randomness (1963:26). Kramer and de Smit (1977:64) note, “Collecting information makes it possible to ‘create order in chaos’. Open systems around us present this pattern. Open systems are therefore capable of gathering information to restrain the striving for disorganization”. In other words, “entropy¹² and information (negentropy) are each other’s opposites”.

Systems can be either **living** or **non-living**. Living systems exhibit **negentropy**. Skyttner (2005:71) describes negentropy:

Living systems can... counteract this tendency (of transformation from high quality to low) through purpose and organization, by importing more energy from their environment than they expend to it. Storing the surplus energy in order to survive is to reverse the entropic process or to create negentropy. A living being can only resist the

¹² Entropy can be understood as any disorder or randomness.

degradation of its own structure. The entropic process influencing the structure and environment of the whole system is beyond individual control.

Skyttner states (233) “Information is... sometimes referred to as negative entropy (or negentropy).... As entropy increases information decreases. As entropy approaches infinity, information approaches zero” and further observes, “Evidently there exist simultaneously two universal contradictory forces: one entropic, destroying and levelling out, and one organizing and building up”. In constructing a conceptual system like dogmatic theology, we expect to see information which brings order to chaos.

2.2.2 Transcendentals

Boulding notes that inherently general systems thinking people prefer an orderly world. It is considered **good**. He (1963:31) also notes that, “To talk about truth at all, and to hold conversations about it, we must look for general systems”. Here we see two of the **transcendentals** mentioned in connection with GST: goodness and truth. I would therefore add that **beauty** also falls in naturally and logically as well to complete the trinity of concepts.

Beauty is about symmetry and proportion and those are impossible concepts without an inherent idea of ratios. Good ratios between parts, forming a wholly pleasing object “Even the most passionate generalist...is likely to admit that there are elements of the empirical world, such as aesthetics, love, literature, poetry, human relations, religion, etc. which resist quantification and yet are orderly in their own bizarre fashion” (27).

Samples (2021) defines the transcendentals, “In philosophy, the transcendental relates to and seeks to describe the nature of reality or being. Therefore, one may think of these values as timeless universals and attributes of being” and explains further, “The cosmic values of truth (that which defines reality), goodness (that which fulfills its purpose), and beauty (that which is lovely) were objective in nature and knowable by the noble seeker”.¹³

In composing a conceptual system like Dogmatic Theology, we expect it to not only accommodate the trinity of transcendentals of truth, goodness, and beauty in its content, but we also believe that as a **whole** the conceptual system should be truth, goodness, and beauty.

¹³Samples, L. 2021. The 3 Transcendentals: Truth, Goodness, & Beauty <https://reasons.org/explore/blogs/reflections/the-3-transcendentals-truth-goodness-beauty> - Reasons to Believe.

2.2.3 The systems paradigm

According to Skyttner (2005:54) the **systems paradigm** is complementary to the traditional scientific paradigm. The traditional scientific paradigm is inherently objective, being based on the concepts of **empiricism** (the belief that the universe is best understood through the senses), **determinism** (the belief in the orderly flow of cause and effect) and **monism** (the inherent inseparability of body and mind) which provided a homogeneous worldview and thus was well suited to the study of electricity, magnetism, light and heat (18).

The **scientific paradigm** can be supplemented with the subjectivity of the systems paradigm which is more focused on:

1. Intervention¹⁴
2. Activism
3. Participation

The systems paradigm also considers “the **emotional, mental and intuitive** components of our being as realities” and therefore addresses, “**explanations, values, beliefs and sentiments**” (54-55, emphasis mine). In summary, the scientist or researcher becomes actively involved and shows empathy. When constructing a dogmatic theology conceptual system, we expect it to not only deal with objective reality but also to accommodate intervention, activism, and participation.

2.2.4 The systems paradigm processes

Skyttner (2005:54) states that since the systems paradigm is more comprehensive it is concerned with researching these **processes**:

1. Life
2. Death
3. Birth
4. Evolution

¹⁴Midgley (2000:70) notes how there has been a resurgence of intervention instead of mere observation: intervention is ‘value-full, not value-neutral’.

5. Adaptation
6. Learning
7. Motivation
8. Interaction

In composing a Dogmatic Theology conceptual system, we believe it should also explain these processes, theologically. Nevertheless, there are some paradigms that oppose the systems paradigm.

2.2.5 ‘Enemies’ of systems thinking

Systems thinking is not without opposition¹⁵. Midgley (2000:39) notes that there are three paradigmatic, philosophical, or worldview “enemies” which oppose the system thinker:

1. **Mechanism.** This expects phenomena to act like clockwork objects that are predictable, functional, and inherently understandable from an independent observer.
2. **Reductionism.** This follows on naturally from mechanism and it sees composite objects as no more than the sum of their parts. “Reductionism...is the reduction of phenomena to simple, objective, causal relationships” (Midgley 2000:39).
3. **Subject/Object Dualism.** This is the deeper problem underlying reductionism. The idea here is that an object can be studied completely objectively by an observer, that there can exist a true separation of relation.

¹⁵It is worth noting that In the book *From Plato to Platonism* Lloyd P. Gerson (2013:10-12) states that ur-Platonic philosophy (that is, early Platonism) provides a philosophical “vaccination” against five other worldviews which seek to replace it. Ur-Platonism is:

1. Antimaterialism – it is false that the only things that exist are bodies and their properties.
2. Antimechanism – it is false that the only explanations of the natural order are materialist.
3. Antinomialism – it is false that the only things that exist are individuals in space-time.
4. Antirelativism – it is false that there is only epistemological and ethical relativism.
5. Antiskepticism – it is false that knowledge is impossible.

Craig Carter, a Christian Platonist, concurs that these five philosophies as anti-Platonic and therefore they will inherently oppose Christian theology (since Christian theology is inescapably intertwined with Platonic thought patterns). Whenever we seek to remove Platonism from our thinking, these alternate and destructive philosophies will move in. In other words, judging by the aforementioned “enemy” paradigms, the Christian Platonism paradigm may be completely compatible with systems thinking and with the systems paradigm?

This brings us to the next major section of this chapter which is concerned with the main categories of systems thinking called GST and cybernetics.

2.3 GST and cybernetics

So has arisen systems theory – the attempt to develop scientific principles to aid us in our struggles with dynamic systems with highly interacting parts (Ashby, 1963:166).

2.3.1 Systems thinking traditions

Systems thinking exists in many different sub-categories. Of the seven in their book, Ramage and Shipp (2009:2) note that all systems thinking is fundamentally derived from two main system thinking traditions:

1. **GST.** This is concerned with openness, emergence, boundary, and hierarchy (Ramage & Shipp, 2009:6).
2. **Cybernetics**¹⁶. This is concerned with information, feedback, and control (6-7).

Almost all other categories of systems thinking can be traced back to one or both traditions (Ramage & Shipp, 2009:2).¹⁷ In engineering a conceptual system of Dogmatic Theology, it may be that one or more of these traditions is useful and/or compatible. However, our focus is on GST and Cybernetics.

2.3.1.1 GST

GST is a **metatheory** and so it can be applied to both material and immaterial or conceptual phenomena (Skyttner, 2005:56 emphasis mine). It provides us with the ultimate tool for a holistic or comprehensive description of reality. Midgley (2000:35) states that, “In general systems theory, a systems view is said to be the most comprehensive view that it is possible to attain”. Skyttner (2005:3) concurs:

¹⁶This will be subdivided in Ramage and Shipp (2009:5-7) into *Early* and *Later Cybernetics*.

¹⁷It is worth noting that in addition to these two systems traditions, Ramage and Shipp (2009:6-7) include four more:

1. System Dynamics. This is focused on computer modelling of systems, feedback, and circularity.
2. Soft and Critical Systems. This is a group of methodologies used in management and public policy based on systems engineering and operational research.
3. Complexity Theory. This is concerned with self-organisation, emergence and nonlinearity and models complicated and interconnected systems.
4. Learning Systems. This is focused on the way humans learn and the systems that facilitate this.

Systems science... has its specific point of view: to understand man¹⁸ and his environment as part of interacting systems. The aim is to study this interaction from multiple perspectives, holistically. Inherent to this approach is a comprehensive historical, contemporary, and futuristic outlook.

Myhill (1963:106) notes that GST should include **biological** and **human-made** systems. Regarding the benefits of GST, Boulding (1963:38) observes, “A general systems point of view is...important in creating a feeling of intellectual community and of a common task, and in this sense the excitement that it generates may be peculiarly beneficial”.

2.3.1.2 Cybernetics

Cybernetics is part of GST (Skyttner, 2005:76) and Boulding (Kramer & de Smit, 1977:99) places cybernetic systems as level three on the **hierarchy of systems**¹⁹. What distinguishes the **cybernetic** level of system from the previous two (frameworks and clockworks (Ramage & Shipp, 2009:72 emphasis mine) is that cybernetic systems are essentially concerned with the transmission and interpretation of information.

The term **cybernetics** is derived from the Greek noun, *kubernetes*, which is translated as “to pilot or rudder” (Kramer and de Smit, 1977:75 emphasis mine). **The Apostolic Bible Polyglot Lexical Concordance** uses the terms “navigator”, “ruler” and “guide” for κυβερνήτης (Van Der Pool, 1996:201). Cybernetics is a type of specialised system concerned not with the system in essence but with a particular aspect of system behaviour - **control** (Kramer and de Smit, 1977:99 & 101-102 emphasis mine). They (106 & 110) define control as “influence on another system, subsystem or entity”. According to Skyttner (2005:77) **control** can be defined as a “purposive influence toward a predetermined goal involving continuous comparison (sic) of current states to future goals” and he outlines control as:

1. Information Processing
2. Programming
3. Decision
4. Reciprocal Communication (Skyttner, 2005:77 emphasis mine).

¹⁸In direct references I have retained the author’s original wording and have opted not to replace ‘man’ with ‘human’ or ‘person’.

¹⁹ The fourth level is the **open system**.

A program is, “coded or prearranged information that controls a process (or behavior) leading it toward a given end. Teleonomic processes are always guided by a program.... Adaptation and development demand reprogramming” (Skyttner, 2005:77). Control and information are inexorably connected, “Control does not refer to transmission of energy and matter, which may be essential for the system concerned, but to the information transmission which goes with it or is derived from it” and, “effective control requires a model of the system being controlled to be part of the control system”. Skyttner (89) makes the same distinction: “One must understand that the working principle of cybernetic control systems is to generate information, not to transform energy”.

Living systems are always controlled and this is from the inside, not the outside (Kramer & de Smit, 1977:80). They have embedded cybernetic control systems that function with very high efficiency. Cybernetic regulation uses the following three measures of performance:

1. **Effectiveness** measures extent of the system’s transformation,
2. **Efficiency** measures the system’s transformation versus the cost, and
3. **Efficacy** measures the system’s contribution to the higher-level system’s purposes (Skyttner, 2005:77 emphasis mine).

Besides the many definitions of the study of cybernetics, according to Kramer and de Smit (1977:102) there are two characteristics:

1. A focus on teleological systems, and
2. An attempt to discover generally valid laws which link the behaviour and structure of teleological systems to their objectives.

Cybernetics systems thinking has always been concerned with errors in complex systems of control and communication of information, seeing them as closely related (Skyttner, 2005:76). Information about function and control is communicated between the parts of the system but also between the system and its relevant environment. The goal of this is to achieve “equilibrium” (i.e., the maintenance of order). Living systems maintain this equilibrium of staying within defined limits by the process of homeostasis’. Thus, cybernetics is concerned with maintaining and restoring stability in systems.

According to Kramer and de Smit (1977:110) there are two categories of control systems, and both have the same goal: nullifying the effects of disturbances on their correct behaviour:

1. Cause-controlled – disturbances on the system trigger countermeasures. In this case, the state of the system is defined directly by its relevant environment.
2. Error-controlled – the system reacts due to the difference between the actual and the desired value of magnitudes which are to be controlled.

Cause control systems have a chain-shaped information-transmission structure. They have a beginning (the input) and end (output) (Kramer & de Smit, 113-114). They have these three characteristics:

1. They seek to control magnitudes. Disturbances impact the magnitudes, so we counteract them.
2. All possible disturbances that influence the process must be known to have effective control.
3. A model of the system is necessary. The reason is that we need to know how certain disturbances effect the system for the cause control system to function properly.

On the other hand, error control systems have a circular structure and therefore no beginning and end. This circular information transmission can be positive or negative. In both situations a part of the system's output is fed back into the system in the form of information about the output.

Positive feedback occurs when information carried back measures the deviation in output compared to a certain level. This information gives an impulse toward increasing the deviation. Conversely, negative feedback occurs when information carried back about a deviation in output reduces the deviation (114). Error control systems have these four characteristics:

1. They function only when there is deviation (between desired and actual values).
2. Disturbances are known or unknown, expected or unexpected. To take appropriate control action, the system is used as the model.
3. They can be unstable.
4. They will act to bring the actual value in line with the desired value, independently of their state (117).

Both control systems exhibit instability. This is particularly apparent in the circular information-transmission structure of error-controlled systems (114). Two causes determine the response of these systems:

1. Time delays in the system
2. Amplification of information in the system

There are differences between the two control systems. Cause control systems respond faster because control action is initiated before a disturbance can affect the system. Its structure prevents instability. To achieve effective cause control requires foreknowledge of disturbances and effects of the disturbance, as well as their effects on the system, potential and actual. Conversely, error control systems can become unstable (Kramer & de Smit, 1977:121). The control systems are combined in complex natural systems. According to Skyttner (2005:78), these are the three general control problems:

1. **Being:** Maintaining internal structure by resisting disorder.
2. **Behaving:** Completing a goal regardless of changing conditions.
3. **Becoming:** Removing bad goals and preserving good ones.

Skyttner (2005:78) summarises the three processes of cybernetic systems, together called throughput:

1. Input
2. Transformation
3. Output²⁰

In composing a Dogmatic Theology conceptual system, we should seek to include a cybernetics system thinking.

2.3.2 The threefold goal of GST systems thinking

GST itself is goal-directed. Skyttner (2005:40-41) summarises the goal of GST as being threefold:

²⁰ Output can be of two kinds: useful to the higher system or waste. The input to one system may be the output to the subsystem.

1. To formulate generalized systems theories including theories of systems dynamics, goal-oriented behaviour, historical development, hierarchic structure, and control processes.
2. To work out a methodological way of describing the functioning and behaviour of systems objects.
3. To elaborate generalized models of systems.

In composing a Dogmatic Theology conceptual system, we should seek to achieve these overall outcomes.

2.4 System design

In this chapter we have given an overview of some of the many concepts involved in the systems paradigm. This is for the intended purpose of designing a conceptual dogmatic theology system. Checkland (1991:314) defines the designed system as: “A man-made entity which an observer elects to treat as a whole having **emergent properties**. Designed systems may be concrete... or abstract”. Linvill (1963:125) defines systems theory as important when addressing problems of systems engineering and notes that the two kinds of problems in system engineering are model making and optimization. All system engineering concerns one or both these areas.

We now hope to begin to conceive and create a model and/or to optimise the current dogmatic theology composition process. The method of doing this is by constructing a service system²¹ in the form of a conceptual model based on the system. This will determine the structure and activity of the service system (Checkland, 1991:318).

2.5 Skyttner’s 10 irreducible properties of open systems

We now focus on Skyttner’s 10 irreducible properties of open systems. This will give a more comprehensive and detailed look at each of the properties present in all open systems. Once we have done this, we will be able to outline a conceptual open system which can be used for concepts found in dogmatic theology. To understand open systems, we need a detailed

²¹ That is, a framework based on GST and cybernetics systems thinking.

summary of their 10 irreducible²² properties. All open systems will always have these same 10 properties present and removing any will render it “not an open system”.

2.5.1 Property 1: Interrelationship and interdependency of objects and their attributes

Unrelated and independent elements can never constitute a system (Skyttner, 2005:53).

2.5.1.1 Parts: Unity, Relation, and Dependence

From this summary we note that unity because of mutual **relation** of parts is considered positive and necessary. In contrast, disunity of parts due to unrelatedness is considered negative and unnecessary. Similarly, unity because of mutual dependence of parts is considered positive and necessary whereas disunity of parts due to independence and one-way dependence is considered negative and unnecessary.

2.5.1.2 Organisation

Skyttner (2005:59) notes that the whole system is distinguished from its parts by its organisation and thus a “random assembly of elements constitutes only a structureless mass unable to accomplish anything”. However, “an orderly assembly of elements necessarily (does not) form a system”. It is “an end product in itself, not one performing any function”.

2.5.1.3 Parts or entities of the whole system

Each part in a system is necessary but **not sufficient** to compose the whole: “A part is anything in a subject that is less than the whole and without which the subject would be really different than it is” (Dolezal, 2017:40). Kramer and de Smit (1977:14) label the parts that compose a system “entities”. These entities have observable “properties” which define the whole system. Without properties entities cannot be observed (15).

²²Irreducibility is the property or concept which means that anything less would render the property or concept non-existent. For example, the famous example according to Michael Behe (In his book, *Darwin's Black Box*) is the concept of the mousetrap. Its component parts are irreducibly complex. This means to function as a mousetrap all the parts are necessary and cannot be removed incrementally. Removing a single part of the mousetrap will render it “not a mousetrap” rather than “less of a mousetrap”.

2.5.1.4 Relations of entities

Skyttner (2005:40) notes that at the various levels of systems, it is the relations between components in the system and not the nature of the individual components that increase its properties and behaviour.

Kramer and de Smit (1977:15) define relation as, “the way in which two or more entities are dependent on each other.” They clarify that the entities relate more in the sense of their properties and that entities without properties have no interrelationships and these entities cannot be observed: “A relation links the properties of various entities” and this linkage “provides scope for interaction” (16). They continue: “The behaviour of the various entities is then no longer independent. A relation exists “if a change in a property of one entity results in a change in a property of another entity””.

Therefore, independence of parts is sacrificed to create relations that together compose the whole system. The relation between the elements or entities constrains the possible behaviour of the system and this is a direct result of the interdependence of the relation (Kramer & de Smit, 1977:16).

2.5.1.4 Horizontal and vertical relations

Systems are wholes composed of parts-in-relation and parts-in-interdependence. Kramer and de Smit (1977:16) note that we should distinguish between the relation of the elements to the whole and the relation of the elements to each other. Without a relation between the element and the whole, we cannot perceive a system. The way parts are related to and depend on/provide for one another result in the system under observation. Therefore, GST will always focus on the following:

1. Parts composing the whole.
2. The parts compose the whole by being in union due to being interdependent, that is:
 - i. in a state of mutual **relation**, and
 - ii. in a state of mutual **dependence**, and
3. The parts compose the whole by not being in disunity due to being:
 - i. **one-way dependent**, or

- ii. unrelated (i.e., **independent**)

2.5.2 Property 2: Holism

Holistic properties not possible to detect by analysis should be possible to define in the system (Skyttner, 2005:53).

Skyttner (50) notes that the modern appreciation of a holistic perspective came through the scientific school of thought known as structuralism. Structuralism studied “wholes that could not be reduced to parts.” Properties of a system will be emergent: they cannot be understood by cutting the system into smaller parts: “Wholes and parts do not have separate existences in living organisms.... These systems show both cohesion and differentiation. Their integrative and self-assertive tendencies exist side by side and are reflected in their co-operative behaviour (67)”.

Part of the historical solidification of holism is in the concept of *gestalten*. Skyttner (2005:50) defines a *gestalt* as: “an organized entity or whole in which the parts, though distinguishable, are interdependent. They have certain characteristics produced by their inclusion in the whole, and the whole has some characteristics belonging to none of the parts”. GST is holistic, Midgley (2000:7) calls holism comprehensiveness. Reductionism is therefore the antithetical framework to GST. Holism is intended to provide a perspective on the entire system, its union of parts due to proper relations and dependencies. This prevents us from reducing the system to being merely equal to the sum of its parts. So, in GST, when studying systems, there will be the following commitment: A holistic/comprehensive perspective is necessary and positive.

2.5.3 Property 3: Goal-seeking

Systemic interaction must result in some goal or final state to be reached or some equilibrium point being approached (Skyttner, 2005:53).

Since the time of the scholastics, goal-seeking or teleology was a fundamental concept (6). Kramer and de Smit (1977:42) in describing stability in system behaviour note that stable, dynamic systems have the property of finality or teleology. They strive towards a goal or a desired state from differing initial states. They (9) describe two states in the open system:

1. **Transient.** The transient state changes in time.

2. **Steady State.**²³ The steady state is the unchanging state of open systems. The system has input and output but the system itself is unchanging. Von Bertalanffy refers to this as 'balance of flow'.

Checkland (1991:314) defines a goal as, "An end which an individual or group of individuals may seek to achieve or which may be attributed to a **system**. Goal is a synonym of **objective**." Every system is full of interactions, and this means teleology is inherent within it. For a system to have its purpose accomplished, it is necessary for it to exhibit: Teleology.

2.5.4 Property 4: Throughput A: transformation process²⁴

All systems if they are to attain their goal, must transform inputs into outputs (Skyttner, 2005:54).

Checkland (1991:319) uses the term conversion to describe the transformation process of inputs to outputs. Checkland and Scholes (1990:39) list the following criteria for measuring a system's transformation ability:

1. **Efficacy** – does the means work?
2. **Efficiency** – the output divided by the resources used.
3. **Effectiveness** – is it meeting the longer-term aim?²⁵

Kramer and de Smit (1977:34) distinguish between a system's total environment and relevant environment. They define the relevant environment as, "that set of entities outside the system, the state of which set is affected by the system or which affect the state of the system itself". It is important to focus the environment on this way to make the research manageable: "The immediate environment is the next higher system minus the system itself.... The environment can exert a degree of control over the system but cannot be controlled by the system" (Skyttner, 2005:63).

Describing biological systems transforming the natural environment, Gerard (1963:121) states that, "organisms continually... clean up nature and do turn it into art, science, philosophy, or

²³Steady state in an open system is now called dynamic equilibrium. 'Such a system is not in a traditional state of equilibrium, in that it is constantly changing, and yet it retains its basic form' (Ramage & Shipp, 2009:59).

²⁴Skyttner (78) labels the processes of input, transformation, and output together as "throughput".

²⁵These three measures have relevance in control or cybernetics which will be discussed in the next chapter.

even simple percepts (sic), by very powerful and widespread sensory and neural mechanisms.” It should also be noted here that organisations, as systems, have classifiable environments. Kramer and de Smit (1977:35-36) list four types of system environments:

1. Placid randomised environment.
2. Placid clustered environment.
3. Disturbed reactive environment; and,
4. Turbulent fields.

Systems are surrounded by their relevant **environments** and this environment is the context of **inputs** and **outputs**. The environment also receives the system’s converted inputs which are known as outputs. Systems will have a productive relation with the environment which will be a form of: Active and **beneficial conversion** within the relevant environment.

2.5.5 Property 5: Throughput B: Inputs²⁶ and outputs

In a closed system the inputs are determined once and for all; in an open system additional inputs are admitted from its environment (Skyttner, 2005:53)

An input is defined as that which is changed by the transformation process while an output is the product of the transformation process. Both inputs and outputs may be concrete or abstract (Checkland, 1991:315). Kramer and de Smit (1977:38) state that a system’s process is its dynamic property. Quoting Diesing, they observe that processes “differ from systems in that they are composed of states rather than of elements and relations”. Just as a system is composed of interrelated and interdependent elements, the system process is composed of states. Kramer and de Smit (1977:38) conclude that a system’s process is defined “as the system of actions of a system”. An open system will exist in a situation where: The relevant environment continually provides inputs converted into received outputs.

²⁶Closed systems only receive inputs. Although Skyttner (2005:63) proposes that the human and his environment is a closed system, and that the universe is an isolated system (with a completely locked boundary closed to all input) I should note that the Christian worldview (or, *weltanschauung*, Checkland, 1991:319) is that the universe (forming part of the broader entity known as *creation ex nihilo*) is an open system.

2.5.6 Property 6: Negentropy²⁷

(Entropy) is the amount of disorder or randomness present in any system. All non-living systems tend toward disorder; left alone they will eventually lose all motion and degenerate into an inert mass. When this permanent stage is reached and no events occur, maximum entropy is attained. A living system can, for a finite time, avert this unalterable process by importing energy from its environment. It is then said to create negentropy, something which is a characteristic of all kinds of life (Skyttner, 2005:53, brackets mine).

Skyttner (2005:71) defines entropy as, “a measure of the relative degree of disorder that exists within a closed system at a defined moment of time”. He (58) summarises Hitchens’s pragmatic and scientific definition of a system as a negentropic entity: “A collection of interrelated entities such that both the collection and the interrelationships together reduce local entropy”.

Kramer and de Smit (1977:47) understand entropy as a measure of the system’s behaviour or state. It is concerned with the dynamics of the system. The processes with which entropy and information of the system is associated will determine the functioning of the system. In discussing the history of the concept of entropy and its relationship with the second law of thermodynamics, Kramer and de Smit (1977:47) observe that, “Entropy is an attribute of the state of the system under study and can be regarded as a measure of the differentiation of the system”. Opposing entropy, we have negentropy, or information (49) or communication (which is simply the transfer of information) (Checkland, 1991:313). Quoting Bronimann, Kramer and de Smit (1977:54) sum up the following properties of communication:

1. Communication is the transmission of messages between entities or subsystems of a system, or between systems.
2. Communication means not only the technical transmission of signals and messages, but also the receiver’s reaction. Like information we can investigate communication from syntactic, semantic and pragmatic points of view.
3. We can envisage communication as from sender to receiver. Also envisage both ways: from sender to receiver and from receiver to sender. Information is the object of the communication.

²⁷Although Skyttner lists this system property as “entropy” I prefer to use the term “negentropy” as a property of open systems.

4. A message contains information when it removes uncertainty in some way²⁸.

Comparing entropy and information, Kramer and de Smit (1977:64) state,

Entropy is a measure of the degree of disorganization in a system. A system's tendency to strive toward a state of maximum disorganization (maximum entropy) is expressed by generalization of the second law of thermodynamics. The contrary striving for organization is shown by the endeavour to collect information. Information can be considered as a measure of organization in a system.

A living system will resist entropy, bringing order through the means of information because it is: Negentropic.

2.5.7 Property 7: Regulation

The interrelated objects constituting the system must be regulated in some fashion so that its goals can be realised. Regulation implies that necessary deviations will be detected and corrected. Feedback is therefore a requisite of effective control. Typical of surviving open systems is a stable state of dynamic equilibrium (Skyttner, 2005:53).

Skyttner (70) defines stability within systems as constancy of structure and function under fluctuation. Kramer and de Smit (1977:40) speak of system behaviour as seeking stability. It is one of the fundamental functions of the system to maintain stable conditions. An unstable state is "usually undesirable". Quoting Forrester, Kramer, and Smit (41) describe system stability as the system returning to its initial condition after a disturbance. They (42) discuss ultra-stable systems as appearing in living systems. He defines ultra-stable systems as having two properties:

1. They must be stable; they must be able to behave stably towards a number of disturbances in the environment, i.e., to return to their initial state after elimination of the disturbance.
2. If new kinds of disturbances emerge from the environment against which the system cannot maintain its existing behaviour, it selects from among the available possibilities, by means of a selection process, of the behaviour that will lead to a new stability.

²⁸ Information reduces uncertainty (Checkland, 1991:315).

Skyttner (2005:70) describes ultra-stability as, “Systems which can restore their stability by changing operation rules when important variables exceed their limits.” Kramer and de Smit (1977:44-45) define multi-stable systems as systems composed of ultra-stable subsystems. These subsystems have the capability of partially adjusting and can thus achieve or improve a desired interaction with the environment in stages. Multi-stability is a characteristic of highly developed systems. In the series of system stabilities (stable, ultra-stable, and multi-stable), the highest form is adaptation which is usually a property only of self-organizing systems. Kramer and de Smit (1977:45) define adaptation as a system that “is able to change its relations with its environment in order to retain an existing steady state, or else to find a new one.”

Systems that have parts that are interrelated and interdependent require some form of order or organisational influence. Without this, the system cannot accomplish its functional task. There will be detection and correction of deviation by this influence. This will necessitate feedback. Successful systems exhibit stability in the form of dynamic equilibrium. So, when it comes to activity within the system, it is: Regulated. This includes: Detection and correction of necessary deviations, through feedback, resulting in stability, in the form of dynamic equilibrium.²⁹

2.5.8 Property 8: Hierarchy/nestedness

Systems are generally complex wholes made up of smaller subsystems. This nesting of systems within other systems is what is implied by hierarchy/nestedness (Skyttner, 2005:54).

Skyttner (65) notes further that usually systems are parts of other systems and compose a systems hierarchy/nestedness. Whichever system is currently being studied, the systems constituting it are subsystems. The system itself is also a necessary but insufficient component of a larger supersystem. A subsystem is equivalent to the system but is contained within a larger system (Checkland, 1991:317). A supersystem is another name for what Checkland (1991:319) calls the wider system.

Kramer and de Smit (1977:34) note that when studying any system, we can go into greater detail by “raising the resolution”. By “zooming in” we study the **subsystem**, and the rest of the system automatically becomes the “relevant environment”. Or vice versa. We can “lower the resolution” or “zoom out” and thus move the system boundary/enviromed out and now consider

²⁹This is where the subject of “control” in cybernetics systems thinking becomes relevant.

the elements which were part of the environment as now part of the system. This is the **supersystem** or **wider system**. If we now focus on the supersystem or wider system, it is merely “the system”. Skyttner (2005:55) observes that “to understand the specific systemic qualities and behaviour on a certain level, it is necessary to study the levels above and below the chosen level.” The levels in the hierarchy/nestedness are distinguishable due to their emergent properties (Checkland, 1991:314). We should expect any system we are studying to be an important component of another larger system and likewise to be composed of other, smaller subsystems, and so on, in both upward and downward directions. We should always see evidence that: Higher systems are composed of systems and systems are composed of lower subsystems.

2.5.9 Property 9: Differentiation

In complex systems, specialized units perform specialized functions. This is a characteristic of all complex systems and may be called specialization or division of labour (Skyttner, 2005:54).

A system can be viewed functionally, as having one main goal inherently programmed into it.³⁰ However, this goal is achieved by many different subgoals, each different to the next. These subgoals are achieved by the subsystem in service of the system. Systems always evidence: Functional unity-in-diversity and diversity-in-unity.

2.5.10 Property 10: Equifinality and multifinality

Open systems have equally valid alternative ways of attaining the same objectives from different initial conditions (convergence) or, from a given initial state, obtain different, and mutually exclusive, objectives (divergence) (Skyttner, 2005:54).

Kramer and de Smit (1977:40) note that converging equifinality originated with von Bertalanffy and it is sometimes considered a proof of life (vitalism) and can be observed in organisations as systems. They comment: “When open systems reach a steady state and show equifinality, the final state will be independent of the initial conditions.” Convergence is also comparable to non-specialisation or unification (Skyttner, 2005:153). Skyttner (2005:71) defines the divergence of multifinality as the reverse condition of equifinality: the “achievement of different ends through the same means.” Systems in time will achieve, in one of two ways: Objectives either by unifying convergence, or diversifying divergence. We have summarised GST and

³⁰Steve Laufmann and Howard Glicksman in the book *Your Designed Body* refer to this as functional coherence and process coherence.

Skyttner's 10 irreducible properties of open systems. Let us now make a simple conceptual system model of this to engineer a whole dogmatic theology.

2.6 Constructing a conceptual open system

Since we endeavour to apply these 10 irreducible properties of open systems to dogmatic theology, we first need to convert them into concepts. We will do this by transforming the properties into principles. Using Skyttner's irreducible properties of systems, we can summarise them into 10 conceptual principles. Chapter 2 will elaborate on the contents of these conceptual principles. For now, I am simply stating them:

1. The whole. Parts composing the whole. The parts compose the whole by being in union due to being interdependent (in a state of mutual relation and in a state of mutual dependence) and not being in disunity (due to being dependent or unrelated/independent).
2. A holistic/comprehensive perspective is necessary and positive.
3. Teleological.
4. Active and beneficial conversion within the relevant environment.
5. The relevant environment continually provides inputs converted into received outputs.
6. Negentropic.
7. Regulated. Including: detection and correction of necessary deviations, through feedback, resulting in stability, in the form of dynamic equilibrium.
8. Higher systems are composed of systems and systems are composed of lower subsystems.
9. Functional unity-in-diversity and diversity-in-unity.
10. Objectives achieved either by unifying convergence, or diversifying divergence.

2.7 Conclusion

We have summarised the system principle which explains what a system is and what it does as well as some foundational ideas of the open system. From there we moved to systems thinking and how it is focused on order and is part of the systems paradigm with its processes

for interpreting reality, which opposes reductionism. We then summarised GST as one of the fundamental systems thinking traditions with its threefold goal and noted the importance of system design. From these we gave a short summary of Skyttner's 10 irreducible properties of open systems and converted these into 10 conceptual principles which we can use as a structure for a dogmatic theology conceptual model, which is now the goal of Chapter 3.

CHAPTER 3 THEOLOGICAL CYBERNETICS AND GST

In the previous chapter I gave an overview of the **system principle** with the seven traditions of **systems thinking**. The focus now is on the two foundational systems thinking traditions: early cybernetics or “system control”³¹ and GST. Most systems thinking traditions arise from either or both (Ramage & Shipp, 2009:2). These are useful for understanding the written word of God and its servant, dogmatic or systematic theology.

Von Bertalanffy notes that the basis of the cybernetic model is the feedback cycle while the basis of the open system model is the interactions between the parts (1968:150). The feedback cycle is appropriate to understand how an open system receives information to control its functioning. The open system is always applicable to composite objects, but cybernetics is not strictly limited to composite objects. These twin concepts of “cybernation” and “cybernated system” are compatible with themes found in the written word of God and Dogmatic Theology.

After a brief overview of cybernetics and authoritative divine direction³² I will demonstrate how the written word of God and its servant, dogmatic theology, function cybernetically. From there I will demonstrate how the written word of God and dogmatic theology have all the properties of cybernated³³ open systems.³⁴

3.1 Cybernetics

The term cybernetics is derived from the Greek noun, *kubernetes*, which means “to pilot or rudder” (Kramer and de Smit, 1977:75). Cybernetic direction or control serves a system’s behaviour by regulating it into acceptable operational parameters. Although cybernetics is a distinct system thinking tradition, it formed part of GST as engineering ideas of information, feedback, and control were applied to systems. Using cybernetics resulted in “the rich interaction of goals, predictions, actions, and response” (Skyttner 2005:76).

³¹ Where appropriate I have opted to use the word “control” instead of “cybernetic/s”.

³² Which tracks the transmission of authority from God himself to the written word of God.

³³ I am using this term to mean divinely directed by an embedded authority.

³⁴ During this research I found many other subjects that could be understood using cybernetics and GST which would be too overwhelming to include as a full treatment: natural theology, personal word of God, authoritative apostolic band, church, gospel, etc.

3.1.1 Cybernetics: Information

Wiener defines information as “a measure of [the] degree of organization” of a system (Ramage & Shipp, 2009:21). Boulding (Kramer & de Smit 1977:99) places cybernetic systems at level three on the hierarchy of systems³⁵. What distinguishes the cybernetic level from the previous two (frameworks and clockworks 72]) is that cybernetic systems are essentially concerned with the transmission and interpretation of information. Skyttner (2005:89) makes an important distinction between information and energy: “One must understand that the working principle of cybernetic control systems is to generate information, not to transform energy”.

In terms of information or intelligence, cybernetics is derived philosophically from Constructivism which understands them as properties of interaction and not commodities. Information or intelligence is thus used by a mechanism or organism, a system, to direct it towards some pre-set goal (76). Cybernetics uses information to restore stability in systems. Von Bertalanffy (1968:150) notes that in a control system information (negentropy) can be transformed into “noise” but not the other way around.³⁶

Dembski (1990:128) gives a helpful summary of the properties of information that exhibit intelligent design. To infer intelligent design requires identifying the presence of information. Information is negentropy³⁷ and presents three attributes: contingency, complexity, and specification.

3.1.1.1 Contingency

This ensures that the object being studied was not the result of an automatic (that is, unintelligent) process. Such an object would have ‘no choice in its production’.

3.1.1.2 Complexity

This ensures that the object being studied is not so simple that it could be produced by chance.

³⁵ The fourth level is the open system.

³⁶ With regards to failure to bring order to a disordered situation – information, feedback, and control (that is, negentropy) – is not a guarantee against failure but a necessary prerequisite against entropy. If failure is maximum entropy, it is guaranteed without negentropy (cybernetics) but negentropy if not going to always be played out perfectly within creation. I do believe cybernetic control is dynamic, in theory, creating adaptations to changing circumstances, to maintain order.

³⁷ Negentropy is the amount of information in the system and is the exact opposite of entropy (Ramage & Shipp, 2009:21).

3.1.1.3 Specification

This ensures that the object has a pattern which is the product of intelligence.

3.1.2 Cybernetics: Feedback (and feedforward)

For Norbert Wiener feedback is the term that connects the cybernetics concepts of communication and control (Ramage & Shipp, 2009:21). Feedback is a strategy that allows a system to adjust to unexpected environmental disturbances. It is based on actual rather than expected system performance and so it is actuated by errors, correcting system performance that is deteriorating (Skyttner, 2005:82). Closed-loop systems are regulated by feedback and feedforward mechanisms.

3.1.2.1 Negative feedback

Negative feedback in the system restores behaviour to normal by correcting deviations to re-align with the predetermined goal (86). Ashby considers negative feedback to be “stable equilibrium” (Ramage & Shipp, 2009:46). If a system does not have negative feedback its stability disappears. In other words, without negative feedback a system becomes unstable. The way instability manifests are that the system’s boundaries start to disappear. Once they completely disappear the system ceases to exist (82). Negative feedback opposes what the system is already doing. The more feedback there is will result in less output as the system is corrected and stabilised³⁸.

3.1.2.2 Positive feedback

Positive feedback is temporary and results in a “runaway” effect. Before the process explodes and destroys the whole system the self-accelerating loop is usually halted (84). Wiener understood positive feedback to be “dangerous and unstable” (Ramage & Shipp, 2009:21). Ashby considers positive feedback to be “unstable equilibrium” (46).

3.1.2.3 Feedforward

Feedforward is pre-emptive which means it produces a predicted, desired future state. All living systems are adjusted to a future state which does yet exist. Feedforward occurs before an event occurs, preparing the system for possible future outcomes. The way it prepares the system is by providing information about the system’s expected behaviour. From there it will

³⁸ The term for this is “error-nulling” (83).

simulate the actual processes. For this reason, feedforward is goal-directed or teleological. The goal is built into the system model which transforms information about predicted futures into changes in the state of the present system (81). Feedforward is intended to maintain a state before time and is not reactionary. An example would be a style guide ahead of time for the rules for which a thesis should abide by which will affect the preparatory response: **forewarned is forearmed**. This is different to receiving editorial feedback on the thesis after the fact, in response.

3.1.3 Cybernetics: Control

Kramer and de Smit (1977:102) emphasise that cybernetics is fundamentally concerned with a particular aspect of system behaviour – control. The primary purpose of cybernetic control is to influence the system it serves (110). They (106) clarify that cybernetic control is not inherent. It is the goal-directed influence upon a system, subsystem, or entity. Skyttner (2005:77) outlines the steps in control as:

1. Information processing
2. Programming
3. Decision
4. Reciprocal communication

He defines a program as: “coded or prearranged information that controls a process (or behavior) leading it toward a given end. Teleonomic processes are always guided by a program.... Adaptation and development demands reprogramming” (Skyttner, 2005:77). It is also worth noting here the definition of an algorithm. Soft-A.I. advocate Marks (2022:16) defines an algorithm as, “a step-by-step set of instructions to accomplish a task”. We should bear in mind that humans can respond “non-algorithmically” and this is what will make an eternal, unbridgeable gulf between humans and artificial intelligence (17). As Cole (2020:61) says, “The Christian mind.... sees more value in persons than in machines. Persons are sacred”.

3.2 Cybernetics: Measures of performance

All cybernetic regulation uses the following three measures of performance in the system they serve:

1. **Effectiveness** measures the extent of the system's transformation.

2. **Efficiency** measures the extent of the system's transformation versus the cost in resources.
3. **Efficacy** measures the extent of the system's contribution to the super-system's³⁹ purposes (Skyttner, 2005:77).

The control system will be perpetually measuring these three, responding and adjusting the system accordingly to maintain stability in the open system it serves.

3.3 Cybernetics: General control problems

According to Skyttner (2005:78), cybernetic influence solves these three general control problems:

1. **Being:** Maintaining internal structure by resisting entropy.
2. **Behaving:** Completing a goal regardless of changing conditions.
3. **Becoming:** Removing bad goals and preserving good ones.

The cybernetic influence will be continually solving these three, responding to disturbances and directing the system accordingly to maintain these attributes in the system it serves.

3.4 Authoritative divine direction

To engineer a whole cybernetic or control system in the field of dogmatic theology we must first acknowledge that there is a chain of embedded cybernetics in the form of authoritative divine direction. Gregg (2021:105) makes an important distinction in authority. There is inherent or natural authority that God has over the cosmos and humanity since He is sovereign and then there is authorisation which is distributed and nested by the higher authority to commission someone else to serve their purposes. We will investigate how the inherent authority of the triune God before creation was subsequently distributed to others who were authorised by Him, ending in the written word of God.

3.4.1 Authoritative divine direction: Historical

God has a single will and act (Jones, 2017:117:118) and though He is not composite, his will and act is communicated through cybernated open systems that in turn are cybernetically directing other open systems. The first cybernetic will and act is God: He is a shepherd (Ge. 48:15) (Laniak, 2006:44). The final cybernetic, cybernated, open system is the written word of

³⁹ The "super-system" is the higher-level system.

God⁴⁰. In this way, divine authority to direct creation, was transmitted from eternity into space and time. Dogmatic theology is only derived from the chain of authoritative divine direction which was established in eternity and then embedded historically.

It should be noted at the outset that in the written word of God the concept of authority and leadership or headship is intertwined with the concept of service. Just as cybernetics is concerned with serving open systems by means of information, feedback, and control, this authority is associated with sacrificial service⁴¹.

3.4.1.1 Pre-creation

In eternity the simple triune God (who is not a system), before creation, existed as *ad intra* and transcendent. God spoke creation into existence, and therefore it is not an extension of his own being (Bray, 2016:78). God is the one Lord (1 Cor. 8:6) which means He cybernates (regulates and directs) all creation, his Being is different to creation. As Creator, He is the sole authoritative divine director. The triune God possesses inherent authority.

In creation (Gen. 1-2) God establishes order (“cosmos”) and eliminates disorder (“chaos”)⁴² through speech (Greidanus, 2018:31-32) or taking dominion (Jones, 2017:110-112).⁴³ God also makes humankind to be his representatives, “exercising care and control over the garden environment” (Cole, 2022:55).

3.4.1.2 Post-creation

During many historical events God “breathed out”⁴⁴ the 39 Old Testament books (recording the various progressive covenants) which we will call ‘canon A’ – the complete and authoritative written word of God for the ethnic Jews: the twelve tribes of Israel. It is authorised by the inherent authority to speak on his behalf authoritatively. This is what is referred to as the product of the “prophets” in Ephesians 2:20 and functioned as the authoritative divine direction for Israel.

⁴⁰ And this influences the church and creation.

⁴¹ See Harmon, M.S. 2020, *The Servant of the Lord and his Servant People*.

⁴² See Greidanus 2018:27-37. This establishes the primeval pattern which will continue through reversals all the way to Revelation.

⁴³ More can be said here about humans being the image of God and thus the authoritative divine direction in creation, but it will have to wait for a later stage.

⁴⁴ The authority of Scripture is “the power or genuineness of Scripture that rests on its inspiration” (Muller, 2017:47). The main terms here are inspiration (173) and *theopneustos* - God-breathed (366).

The apologist Theophilus taught that God created through the word (*Logos*) and this same *Logos* inspired the prophetic writers of Scripture to speak truth (Kruger, 2017:70). In canon A we learn of God's speech as transforming chaos into order⁴⁵ and we are witnessing God breathing out a cybernated text through authoritative Jews called "prophets". It is by his cybernation through the prophets that the text comes into being. Bray (2014:614) explains it like this: "Either way, it seems to be indisputable that both Peter and Paul affirmed that the Holy Spirit inspired the Old Testament writers, and that was certainly the view held by the early church."

3.4.1.3 Post-canon A

As the divine-human representative within creation, Jesus Christ, the incarnate personal word⁴⁶ of God – "the chief cornerstone" in Eph. 2:20 – fulfilled the prophecies in the text of the Law and the Prophets (Matt. 5:17). In his birth, life, ministry, death, resurrection and ascension at the end of the intertestamental period⁴⁷ He modelled and functioned as the authoritative divine director and direction within the twelve tribes of Israel. The entirety of canon A foreshadows Him (Williams, 2003:8).

The authoritative divine director and direction is light and brings order (*cosmos*): "With Christ's first coming, the light began to penetrate the darkness" (Greidanus, 2018:122). His core audience were the twelve disciples who developed into representatives as his authoritative apostolic band. They, or their close associates (Mark and the physician Luke), would write the gospel accounts outlining how the Christ brings cosmos out of chaos:

1. Jesus, the word of God is the great Creator.
2. God so loved the cosmos.
3. Jesus, the light of the world, shines in the darkness.
4. Jesus contrasts the kingdom of Heaven with outer darkness.

⁴⁵ The Lord rebukes the seas in Ps. 104 and the Lord as creator brings order through speech in Isaia. 45.

⁴⁶ Personal word refers to the second person of the Trinity, whether *asarkos* or *ensarkos* (at whatever stage in his pre-existence, birth, life, ministry, death, resurrection and ascension).

⁴⁷ Intertestamental period – "Approximately four hundred years of Jewish history immediately prior to the birth of Christ, so-called because no canonical book of the Old or New Testament was written during the period" (Horton, 2006:690).

5. Jesus withstands Satan's temptations⁴⁸.
6. Jesus rebukes demons and casts them out.
7. Jesus rebukes the wind and calms the sea.
8. Jesus is sovereign over the chaotic sea.
9. Jesus's power heals the sick.
10. Jesus raises the dead.
11. The powers of darkness seek to destroy Jesus.
12. Jesus rises from death (Greidanus, 2018:122-132).

Harrison (1962:14) observes that in John's gospel the word is surrounded by terms concerning "disclosure and communication": light and shining (1:5 & 9); glory (14); and, declared (18). Tertullian, appealing to Justin Martyr, taught that the Christ was the "*Logos* of God", was "the primordial first-begotten Word, accompanied by power and reason, and based on Spirit" (Kruger, 2017:72-73). Gregg (2021:113) summarises: "Jesus' claim that He had been given "all authority" means that God, who possesses natural authority over all that He created, has invested in Christ unlimited sovereignty over the actions, thoughts and opinions of everything and everyone in the created realm."

3.4.1.4 Post-ascension

After Christ, the Holy Spirit was given to the disciples at Pentecost (Acts 2:1-4) providing an embedded authoritative divine director to bring order by reversing "the chaos of Babel" (Greidanus, 2018:135). Jones (2017:169) states it well: "God, the Holy One, imparts his holiness to Christ, who then works his image in his people by bestowing on them the Spirit of Christ. This is true Christian holiness."

During the apostolic era Jesus Christ's remnant (led by the kerygma of the core authoritative apostolic band⁴⁹ and their close associates) wrote the books of the New Testament, completing the ontological canon (we can call this 'canon B') and establishing the circulation

⁴⁸ "If Jesus, the Word made flesh and tabernacle of God's presence (Jn. 1:14), quoted God's Word and remained faithful to it in order to resist temptation and deception from Satan, should we not also follow him in doing the same thing?" (Beale & Kim, 2014:160).

⁴⁹ *Kerygma* – "Greek for "preaching" or "proclamation"; the content of the gospel message" (Horton, 2006:690).

of the functional canon. These are “the apostles” in Ephesians 2:20.⁵⁰ The authoritative apostolic band, “appointed by Christ to speak and act for him” (Kruger, 2017:76) modelled and functioned as the canon (2013:67): a temporary authoritative divine direction as it was written down. Apostolicity is acceptability: “The role of the Apostles as teachers of the Church was recognised from the start, as we can see from the career of Paul” (Bray, 1997:46). In Acts, Paul is commissioned to spread the light (Greidanus, 2018:136), bringing cosmos out of chaos. Kruger (2013:129-130) notes a repeating pattern in Paul’s writings:

1. Paul affirms his own apostolic authority to communicate for Christ.
2. He clarifies that both his oral communication as well as written letters has apostolic authority.
3. He indicates that anyone rejecting his oral or written communications is in effect rejecting the spoken and written communication of commands from the personal word of God (Christ) and therefore subject to prophetic condemnation or excommunication.

Paul appeals to his own apostolic authority in the following texts: Galatians 1:1;1 Thessalonians 2:13; 1 Corinthians 14:37-38; 2 Thessalonians 3:6, 14 (2013:123-130). Other New Testament letters expressing apostolic authority are Hebrews 2:1-4; 2 Peter 3:2; 1 John 1:1-4; Revelation 1:1-3 (147-153). Gregg (2021:121) in explaining the commission Jesus gives the apostles in John 20:21, notes: “These words of official commissioning tell us that the authority God had delegated to Christ has now been delegated to His subordinates.”

The authoritative apostolic and prophetic offices were closed (Bray, 2016:730): “Certainly the early church very quickly accepted that the Twelve were unique and that their ministerial commission did not extend to others”. The Holy Spirit worked in that way once and the mission was accomplished permanently. The mission was to cybernate (through information, feedback, and control) a document of authoritative divine direction with the properties of a system (open, bound, hierarchic, and emergent/design pattern) that could be used to cybernetically influence the Church.

With the establishment of the canon the authoritative apostolic band was replaced with a plurality of bishops/eldership (Kruger, 2017:76-80). The eldership had a single function: to shepherd the flock of God. They were thus the post-apostolic means of the administration of the authoritative divine direction documents. The shepherding included the following tasks:

⁵⁰ Apostolic Age – “First Century AD, New Testament era” (680).

teaching the written word of God; protecting the flock against false teaching; providing oversight, and general pastoral care (76). All of these are examples of an embedded perpetual authoritative direction.

3.4.1.5 Sub-apostolic age

We enter the “sub-apostolic age” (Lane, 2006:8). With canon B⁵¹ complete, the whole written word of God (including integrated Old and New Testaments) comes to be defined as the exclusive canon, completing the authoritative divine direction in sacred literature. The entire canon B reflects back on Christ (Williams, 2003:8).⁵² The letters of canon B communicate the following regarding cosmos from chaos:

1. All things created and reconciled through Christ.
2. We are children of the light, delivered from darkness.
3. We battle the cosmic powers of darkness.
4. The chaos of present suffering and the hope of a new creation.
5. In the midst of chaos we are more than conquerors.
6. In Christ we are already a new creation.
7. The last days are already here.
8. Satan and his followers will be cast into utter darkness.
9. The resurrection from the dead.
10. We await a new heavens and a new earth (Greidanus, 2018:140-149).

From this time onwards, particularly through orally communicated instruction (Kruger, 2017:169-172), the centre of Christian worship being “the ministry of the Word” (99-102) is the incremental progression of **cosmos** and recession of **chaos**. It can be traced throughout the written word of God that it was always God’s intention “to expand the sanctuary of Eden until it filled the whole earth” (Beale & Kim, 2014:135): “The orderly, harmonious cosmos of Genesis 1 and 2 will be fully restored” (Greidanus, 2018:93).

⁵¹ Including: Ontological, Functional and Exclusive Canon definitions (Kruger, 2013:27-46).

⁵² According to the Baptist Confession of Faith: “The Holy Scripture is the only sufficient, certain, and infallible rule of all saving knowledge, faith, and obedience,¹ although the light of nature, and the works of creation and providence do so far manifest the goodness, wisdom, and power of God, as to leave men inexcusable; yet they are not sufficient to give that knowledge of God and His will which is necessary unto salvation.”

3.4.1.6 Post-creedal era

Once the creeds, due to the ecumenical councils, had formally distilled and established the great mysteries of the dogma of the triune God and the dogma of Christ, it was possible to begin an ecclesiological tradition of theological reflection within orthodoxy, orthokardia and orthopraxy “guardrails”. These reflections were not intended to usurp the authority of the written word of God but instead provided the same truths in distilled narrative-propositional form that allowed for quick absorption by the church’s heart (Naugle, 2002:267-274) or worldview⁵³. They also provide a standard of orthodoxy⁵⁴ to enable simple defence against heresies and heterodoxy⁵⁵.

These ‘core’ ideas of the Christian theism worldview empower Christians to distinguish between true Christianity and competing false groups. The ‘negotiables’ are items allowing for debate amongst Christians, without compromising the tenets of the fundamental dogmas.⁵⁶ It is clear from this historical overview of the transmission of authoritative divine direction (from God *ad intra* to the written word of God) that the triune God, as sovereign authority over all creation, always embeds nested cybernetic systems within other systems to direct and regulate them. In a variety of ways and means, these cybernetic systems establish and actualise God’s own authoritative divine direction within creation.

3.4.2 Authoritative divine direction: Written word of God and Dogmatic Theology

Authoritative divine direction systems (the personal and written word of God)⁵⁷ direct the church. Cole (2020:24) notes that the subjects of Bibliology and Christology are very closely related. The operation of the ascended Christ and Scripture as authoritative divine direction within the church is too. Dogmatic Theology assists this purpose. Cole (14) describes Dogmatic Theology as needing to be “faithful to God, faithful to God’s word” and adds “doing theology ought to be an offering to God” (17). Comparing the authority of the written word of God to the authority of church tradition, Cole (51-52) makes a distinction which can apply to the distinction between the written word of God and Dogmatic Theology: “Scripture... is the ruling norm (*norma normans*), while tradition is a ruled norm (*norma normata*)”. In systems

⁵³ Worldview – “One’s way of interpreting life and its various phenomena: may be influenced by religion, race, culture, socioeconomic status, gender, experience, and so on” (Horton, 2006:698).

⁵⁴ Orthodoxy – “Adherence to proper or accepted belief, approved doctrine” (694).

⁵⁵ Heterodox – “Not orthodox; contrary to established doctrine; heretical” (689).

⁵⁶ Perhaps it may be useful to use the distinction of “polemics” for in-house debate amongst believers on non-essentials. Polemics is “the study of theological controversies or arguments” (695).

⁵⁷ Jones (2017:39) compares God’s theophanies to God “stooping down” to humans for us to understand Him.

thinking this is the distinction between the written word of God as the authoritative divine direction versus Dogmatic Theology which serves this purpose, as an assistant. As cybernetics is concerned with information, feedback, and control, authoritative divine direction is:

1. Divine to human communication or unidirectional special revelation,
2. Divine-human reciprocal communication and interrelations or mutual indwelling⁵⁸, and
3. Divine control or programmatic shepherding or 'Lordship'.

The personal and written word of God are models of this for us to perceive and understand spiritual realities in a created context.

3.4.3 Personal word of God and authoritative divine direction

Jesus Christ, the personal word of God, is the authoritative divine director, in flesh:

1. Divine to human communication of person, unidirectionally: incarnation.
2. Divine-human intercommunications and interrelations or mutual indwelling of natures: hypostatic union.
3. Divine control or programmatic shepherding and Lordship: the training of the authoritative apostolic band.

In the incarnation (that is, the visible mission of the second person of the triune God) Jesus Christ we have an understandable authoritative divine director from which we can perceive God the Father's character as authoritative divine director.

3.4.4 Written word of God and authoritative divine direction

The canon, the written word of God, is the spirated, final authoritative divine direction:

1. Divine and human unidirectional communication: plenary and verbal spiration,

⁵⁸ Perichoresis is found in the dogma of the triune God (the three persons), the doctrine of the hypostatic union (how the divine and human natures relate) in the dogma of the incarnated Christ and in the "participation" in the divine nature found in the doctrine of soteriology (Twombly, 2015:5).

2. Divine-human communications and interrelations: dual⁵⁹ (divine-human) authorship, and
3. Divine control or programmatic shepherding through words: divine authority (due to being God-breathed).

In the written word of God, we have a clearly communicated authoritative divine direction which we can read and obey.

3.4.5 Authoritative divine direction: Natural theology

Natural theology is “the knowledge of God that is available to reason through the revelation of God in the natural order” (Muller, 2017:362). Natural theology which comes from general revelation is not a complete authoritative divine direction system since it is an **implicit** or **inferred** knowledge of God. Sacred theology (systematic or dogmatic or biblical) is an **explicit** knowledge of God. Haines (2021:41-42) summarises what the written word of God says concerning the functional limits of general revelation and natural theology:

1. God’s existence and divine nature is revealed through creation.
2. Human consideration of the sensible world leads to imperfect knowledge of God’s existence and divine nature.
3. This knowledge of God’s existence and divine nature is insufficient to save people.

Some knowledge about God’s existence and nature is available to all people through contingent reality (creation). Although necessary for inferring a creator from the creation, this knowledge is imperfect and insufficient for salvation (Muller, 2017:315). Therefore, although natural theology is one of the ‘two books’ we should state that it is not completely cybernetic⁶⁰. Natural theology is not:

1. Divine revelation in the form of explicit divine to human communication,
2. Able to actualise divine-human communication and interrelation, and
3. Divine shepherding or Lordship.⁶¹

⁵⁹ “A mysterious double agency has produced Scripture” (Cole, 2020:22).

⁶⁰ “Natural theology may give a person a dim knowledge of God’s attributes, but in Christ, these attributes ‘sparkle’ because they are revealed in redemption” (Jones, 2017:34).

⁶¹ Cole (2020:92) summarising Erickson calls general revelation “less particularized and less explicit” than the written word of God.

Regardless of these limitations of natural theology, it provides a necessary, preparatory analogical framework for all three cybernetic functions of Dogmatic Theology. From creation we can know about and understand:

1. **Communication** between personal beings,
2. **Communion** with personal beings⁶², and
3. **Community** roles between personal beings.

Knowing about personal beings through subjects like communication⁶³, communion⁶⁴, and community is necessary preparation to understand what the written word of God and dogmatic theology proclaim and explain concerning the triune God and how he nests authoritative divine direction systems in creation. General revelation and natural theology are useful for preparing and exercising our minds to understand both cybernetic influence and cybernated systems. Elwell (2006:26) observes: "Although fragmentary, incomplete, and often distorted, general or natural revelation is a genuinely valid disclosure by God of his majesty and power in the created realm (Rom. 1:18-32)."

Through creation we can understand cybernetic measures of performance (effectiveness, efficiency, and efficacy), cybernetic general control problems (being, behaving, and becoming), and GST (open systems, boundaries, hierarchies, and emergence/design pattern/downward causation). All of this is good preparation for using systems traditions applied to understanding the entities and contents of both the written word of God and Dogmatic Theology: "Through general revelation from the absolute God, people find out about God's moral principles for justice in society and, through special revelation, about God's loving plans and purposes for unjust people" (Lewis, 2006:376).

3.4.6 Authoritative divine direction: Measures of performance

Authoritative divine direction measures the performance in these three categories of the systems they embed and cybernate: effectiveness, efficiency, and efficacy.

⁶² Communion is important as we will commune with the persons of the trinity. We commune with the Father in love, the Son in grace and the Spirit as he comforts or helps us. Further, in the Lord's Supper we commune with the trinity (Jones, 2017:26-29). At the resurrection full conformity to the Son, and eternal communion will be realised (Jones, 2021:197).

⁶³ "Love, communication and fellowship of persons have always been at the center of reality with or without a created order" (Cole, 2020:95).

⁶⁴ "The triune God is a being in communion" (94).

3.4.6.1 System effectiveness

Authoritative divine direction measures the extent that all nested open systems achieve their intended transformation. System transformation of the church and creation includes liberation, sanctification⁶⁵, and glorification⁶⁶. It is conversion to, followed by adjustment within, the Christian theism worldview. Therefore, image of God transformation⁶⁷ can be understood as evangelism followed by discipleship into Christoformity⁶⁸. God's systems of authoritative divine direction pursue maximum effectiveness in each of the nested open systems they embed and cybernate. Jones (2021) calls this "The Great Metamorphosis" (85) which includes "Inaugurated Transformation" or regeneration (89), "Increased transformation" or sanctification (121), and "Perfected Transformation" or glorification (171).

3.4.6.2 System efficiency

The authoritative divine direction measures the extent of all the nested open systems' transformation versus the cost in resources. In the church this is a worldview conversion to, and adjustment within, the Christian theism worldview. God's systems of authoritative divine direction pursue maximum efficiency in each of the nested open systems they embed and cybernate.

3.4.6.3 System efficacy

Authoritative divine direction measures the extent that all the nested open systems contribute to the super-system's purposes. In the church and creation, Jesus Christ, as ascended king, is the embedded super-system. God's authoritative divine direction systems pursue maximum efficacy in each of the nested open systems they embed and cybernate. The authoritative divine direction perpetually measures these three performances in the open systems they embed and adjust those systems accordingly.

⁶⁵ "(Jesus Christ) came to die in order to make us holy (1 Pet. 2:24)" (Jones 2017:169, parenthesis mine).

⁶⁶ We will become glorious due to the beatific vision. First John 3:2 says that seeing Jesus Christ face to face will glorify us (107).

⁶⁷ "Only with a Christian mind, whereby the Spirit leads us, are we able to understand the wisdom of God" (161).

⁶⁸ McKnight, S. 2019, *Pastor Paul: Nurturing a Culture of Christoformity in the Church (Theological Explorations for the Church Catholic)*. Grand Rapids, MI: BrazosPress.

3.4.7 Authoritative divine direction: Control problems

Authoritative divine direction solves these three control problems in the systems they embed: being, behaving, and becoming.

3.4.7.1 System origin and maintenance

Originating and maintaining internal structure within all nested open systems and resisting disorder from without.

3.4.7.2 System behaviour regulation

Labouring towards the completion of the alignment to the will of God despite changing conditions to all nested open systems.

3.4.7.3 System transformation

Removing bad goals from all the nested open systems and preserving good goals.

Authoritative divine direction – from God⁶⁹ to the Old Covenant to the incarnate personal word of God to the authoritative apostolic band to the written word of God – desires to actualise the same outcomes in creation and the church: liberation, sanctification, and glorification.

3.5 The written word of God and cybernetics

The written word is cybernated by God: it is God-breathed and written by authoritative prophetic and apostolic authors. This qualifies it as the final, highest regulator or control of the church.

Van Der Pool in *The Lexical Concordance of the Apostolic Bible Polyglot*⁷⁰ uses the terms “navigator”, “ruler”, and “guide” for κυβερνήτης found in Prov. 23:34 and Ezekiel 27:8, 27-28 in the LXX⁷¹, and in Acts 27:11 and Revelation 18:17 in the New Testament. Thus, in the written word of God itself we see the same term used with reference to control and information.

⁶⁹ The only authoritative divine direction that is not an open system is the triune God himself. God, by definition, is simple and so we must not refer to Him as a system. In this chapter we refer to the one divine nature and any of the persons of the trinity as “authoritative divine director”.

⁷⁰ www.apostolicbibleapp.com, accessed 24/03/2023.

⁷¹ LXX is the Septuagint.

The exclusive canon of the written word of God is an authoritative divine direction system composed of a pair of interrelated and interdependent testaments, breathed out by God over history. It forms an integrated whole intended to perform the divine function of Christoformity: liberation⁷², sanctification, and glorification⁷³.

Cybernetics applied to the written word of God reveals that Scripture is a type of specialised system concerned with maintaining the church's behaviour – divine control. Stott (2006:22-23) summarises the big idea with three distinct but related terms: revelation, inspiration⁷⁴, and authority.

3.5.1 Revelation

This means 'unveiling'. God has unveiled Himself to humanity. God is beyond our knowledge and therefore we need Him to reveal Himself. Here we see the cybernetic principle of information.

3.5.2 Inspiration

This is the 'mode' God has chosen to unveil Himself. He has done this partly in nature (general revelation) and completely in the personal and written word of God (Jesus Christ and Scripture, respectively). God has also spoken to other people and this verbal communication is called inspiration (or spiration). Stott (23): "The meaning, then, is not that God breathed into the writers, nor that he somehow breathed into the writings to give them their special character, but that what was written by the human authors was breathed out by God. He spoke through them. They were his spokesmen." Here we can perceive the cybernetic principle of divine-human inter-communications or mutual indwelling.

3.5.3 Authority

The written word of God possesses authority because it is a divine revelation by divine inspiration. Since it is the word from God, we are subject to its authority and must submit to it.

⁷² "According to Saint Paul we live in a "groaning" creation awaiting its liberation" (Cole, 2020:56).

⁷³ "For I consider that our present sufferings cannot even be compared to the coming glory that will be revealed to us. For the creation eagerly waits for the revelation of the sons of God." Romans 8:18-19, NET).

⁷⁴ I am using "spiration" and "spirated" (which is usually reserved for the personal property of the Holy Spirit) in this chapter to distinguish from "inspired" due to the ambiguity sometimes attached to the latter. "In many ways, the term "inspired" is not strong enough and is indeed misleading" (21).

God's word carries the authority of the divine speaker himself. Here we can perceive the cybernetic principle of control.

3.6 The written word of God: Worldview throughput

The written word of God, as church control system, has a three-stage process, together called throughput which is applicable to worldview: input, transformation, and output. In composing a dogmatic theology system, we should ensure it functions as a cybernetic system embedded in the church. In other words, our dogmatic theology is controlled by the written word of God and operates apologetically by defending the faith. Both human reason and acts of interpretation are grounded in worldview (Naugle, 2022:310). Worldview is articulated in propositions⁷⁵ and/or narratives which compose a "comprehensive view of reality" (Anderson, 2017:18). When it comes to regulating worldviews, the written word of God as the system of authoritative divine direction has three processes: input, transformation, and output. Together, these are worldview throughput.⁷⁶

3.6.1 The written word of God: Worldview input

Competing propositions and narratives in the worldview milieu surround the church. Anderson (2017:19-21) summarises these worldviews according to four sets of questions:

1. What is our nature?
2. What is our world?
3. What is our problem?
4. What is our end?

Every human heart asks these questions, and every worldview provides a set of answers. The Christian theism worldview has answers to these questions, derived from the written word of

⁷⁵ All worldviews are composed of presuppositions that can be stated in propositional form.

⁷⁶ I would use this or a similar pattern (for example, covenants) for Biblical Theology rather than Systematic or Dogmatic Theology. As I see it, the Biblical Theology (supplemented by Historical Theology) generates from exegesis of the Bible and Systematic and Dogmatic Theology is a stage further in the process. Along the whole process is the human worldview which is in a dynamic and competing relation with God, the Bible, and creation.

God. Dogmatic Theology provides answers in propositional form and biblical theology provides answers in narrative form⁷⁷.

What happens is a person with a flawed, alternate worldview, with a mix of answers to the above questions, will be confronted with the written word of God, which forces the person to either retain, reject, or amend their current worldview. The written word of God is thus receiving input from the surrounding worldview milieu (the human heart) and attempting to transform this heart. Likewise, the human heart is receiving the written word of God and engaging with it. This engagement may be with the written word of God itself which contains propositional and narrative truth, or it may be with dogmatic or biblical theology, which will be distilled versions of the written word of God.

3.6.2 The written word of God: Worldview transformation

Transformation of the worldview or heart occurs when the written word of God with the Holy Spirit transforms the propositions and narratives of the worldview. When this occurs the written word of God, through truth in propositional and narrative form, liberates, sanctifies, and glorifies the heart. The written word of God, the authoritative divine direction, converts the incorrect propositions or narratives, comparing them to truth (the revealed knowledge of God).

3.6.3 The written word of God: Worldview output

The worldview output of the written word of God can be of two kinds: useful to the higher system (glorifying Jesus Christ) or waste (not glorifying Jesus Christ). To glorify Christ requires Christoformity output: orthodoxy, orthokardia, and orthopraxy in the mind, heart, and behaviour of the reader/hearer. The written word of God worldview input to one system may be the output from the worldview subsystem: this explains how theology develops over time.

3.7 The written word of God: Divine communication

God, by communicating the written word of God, acts to restore stability in creation and the church. Divine communication or revelation⁷⁸ in the form of the written word of God is used by

⁷⁷ Another simple distinction may be that dogmatic theology can generate truth from proof-texts and biblical theology on contexts.

⁷⁸ Boulding (Kramer & de Smit, 1977:99) places cybernetic systems as level three on the hierarchy of systems. What distinguishes the cybernetic level of system from the previous two (frameworks and clockworks [Ramage & Shipp, 2009:72]) is that the written word of God as a cybernetic system is essentially concerned with the transmission and interpretation of divine revelation.

the church to direct it towards a pre-set goal of ultimate Christoformity: complete liberation, sanctification, and glorification.

Even though God reveals himself to us, we cannot fully comprehend Him. Nevertheless, what we do receive is understandable, divine truth. Jones notes: “Our knowledge of him is from himself, through the Mediator, which finds its form in his Word. God thus accommodates himself to us, through the Mediator, which finds its form in his Word. God thus accommodates himself to us by speaking through a Mediator” (2017:205). Special revelation infers design since it is information from an intelligent source. The written word of God exhibits the properties of information: contingency, complexity, and specification.

3.7.1 Contingency

The written word of God is not the result of an automatic (unintelligent) process. Rather, it was spirated by the personal, intelligent Holy Spirit and written by intelligent human beings under his direction. The term *theopneustos* is used in 2 Timothy 3:16 to communicate this idea of the human authors being influenced by the Holy Spirit in the writing of the text. It clarifies how the writing has dual authorship, with the divine author as primary and the human author as serving this purpose (Muller, 2017:366). As Williams (2003:104) states, “In revealing his will to us in this special revelation... God did not override the personalities of the human authors”.

3.7.2 Complexity

The written word of God is too complex to have been produced by chance.⁷⁹

3.7.3 Specification

The written word of God withstands scrutiny since biblical theology⁸⁰ shows progressive covenant themes⁸¹, prophecies and typology, from Genesis to Revelation, all of which are patterns. Patterns are a product of intelligence.

⁷⁹ Here I appeal to Biblical Theology which in essence is a study of design: highly complex order, pattern, and purpose. For example, Köstenberger and Goswell’s book, “Biblical Theology: A canonical, thematic & ethical approach” provides exhaustive evidence of order, pattern, and purpose from canon down to individual “parts” – that is, the 66 books of the Bible. Canonical *order* is the subject of “paratext”, *pattern* is the subject of “intertextuality”, themes, and covenants, and *purpose* is the subject of “ethics” (stated internally, 2 Tim. 3:16-17).

⁸⁰ Biblical theology – “The study of God based on the teaching of Scripture; seeks to integrate the teachings of the biblical writers into a comprehensive view of the teaching of the whole Bible” (Horton, 2006:682).

⁸¹ For more on progressive covenantalism see Gentry and Wellum *Kingdom through Covenant* and *God’s Kingdom through God’s Covenant*.

3.8 The written word of God: Divine-human relations

The church, having divine-human relations, as a divine closed-loop system, is regulated by divine feedback and divine feedforward mechanisms found in the written word of God. These feedback mechanisms are inherent in the text which is a divine-human collaborative inspiration. As the triune God with the prophets and apostles communicated with each other, the text was produced. Divine feedback is a strategy that allows creation and the church to adjust to unexpected disturbances. It is based on **actual** rather than **expected** performance of creation and the church. It is actuated by errors (sin and its effects) in creation and the church, and it corrects a deteriorating creation and church, bringing life and renewal.

Divine feedforward is **anticipatory** which means it produces a divinely predicted and divinely desired state in the future of creation and church. These two divine living systems are adjusted to a future state which does not yet exist. Divine feedforward occurs before an event occurs. God prepares creation and church for future possible outcomes. He prepares creation and church by providing information about creation and church's expected behaviour (liberty, holiness, and glory)⁸². From there He simulates the actual processes. For this reason, divine feedforward is goal-directed or teleological for creation and the church. The divine goal is built into the creation and church models which transforms information about predicted futures (by prophecy: foretelling) into changes in the state (by prophecy: forthtelling) of the present system which is the (creation and church).

3.8.1 Divine negative feedback

Divine negative feedback in creation and church restores creation and church to normal by correcting sinful deviations to re-align with the predetermined goal of Christoformity: liberty, holiness, and glory. If creation and the church do not have negative feedback their stability disappears. In other words, without negative feedback, creation and church become **unstable**. Natural instability occurs when the boundary between orderly creation (cosmos) and chaos starts to disappear. Likewise, ecclesiological instability occurs when the boundary/enviroment between orderly church and the world starts to disappear. Once they completely disappear creation and church will cease to exist. Divine negative feedback opposes what a fallen creation and deviant church is producing. The more negative feedback there is the more this

⁸² Jesus Christ modelled liberty, holiness, and glory as the perfect Image of God, one which we can emulate as broken imagers of God (Jones, 2017:166).

will result in less output as creation and the church is corrected and stabilised. The Scriptural term for this is “putting to death”.

3.8.2 Divine positive feedback

Divine positive feedback is temporary and results in a ‘runaway’ effect. Before the process explodes and destroys the whole of creation or the whole church the self-accelerating loop is usually halted.

3.9 The written word of God: Divine control

The primary purpose of divine control is to influence creation and church as a programmatic ‘shepherd’. This control is possible only because of the written word of God having divine authority. Divine control is not inherent to creation and church. It is the goal-directed authoritative divine influence upon creation generally and church specifically. The written word of God as control is:

1. Divine communication (special revelation) processing by creation and church.
2. Creation and church programming.
3. Decision⁸³.
4. Reciprocal communication (God-creation and God-church).

The written word of God functioning as divine program is defined as: spirated plenary and verbal revelation that controls a creation or church process or behaviour leading it toward the given end of Christoformity.

Since a teleonomic process of Christoformity (liberation, sanctification, and glorification) is always guided by a divine program, creation and church adaptation and development requires reprogramming. The reprogramming is by means of authoritative divine direction which is the written word of God as articulated through propositions and narratives. It is useful to have a working definition of a divine algorithm. Through divine control by means of the written word

⁸³ “A summary (of a general control system) tells us that a controlled system must be able to read the state of an important variable and examine if this is under, on, or above the permitted value. This is done by the system’s **detector**. Therefore, the system has to possess certain preferences. The handling of these preferences is managed by the **selector** (decider) which choses (sic) the alternative best corresponding to the preferences” (Skyttner 2005:91, parentheses mine). “(The) **Decider** receives information inputs from all other subsystems and transmits to them information output that control the entire system. This executive decider has a hierarchical structure, the levels of which are called *echelons*” (125, parenthesis mine).

of God, creation and church have a divine algorithm which the personal word and the Holy Spirit together use as 'instructions' to accomplish the task of Christoformity: liberation, sanctification, and glorification.

Humans can respond non-algorithmically to the overarching message of the written word of God to submit oneself completely to the personal and written Word of God to reap its benefits: liberty, holiness, and glory. Speaking of the Gospel presentation to Gentiles, Bray (2016:510) observes:

Fundamental to this was the Christian insistence that human beings are free to choose between good and evil. Many ancient people did not believe that. They thought that they were only doing what came naturally to them and that they could not change their behavior. This, said the Christians, was false. No human being is bound by his nature to lead a sinful life.

3.10 The written word of God: Measures of performance

Since the written word of God is a cybernetic control system it measures performance in the system it serves: the head, heart, and hands of the church. The written word of God measures church performance in terms of Christoformity: liberation, sanctification, and glorification. It regulates the worldview of the church using the following three measures of performance: effectiveness, efficiency, and efficacy.

3.10.1 Effectiveness of the written word of God

This measures the extent that the church worldview transforms by being liberated, sanctified, and glorified. Church transformation is primarily the conversion to, and secondarily the adjustment within, the Christian theism worldview⁸⁴ by means of the written word of God. Therefore, transformation can be understood as salvation, as a product of kerygmatic evangelism, followed by discipleship. Through the propositional-narrative written word of God, the personal ascended word of God guarantees that the church is maximally effective in accomplishing Christoformity: liberation, sanctification, and glorification.

⁸⁴ "Worldviews can be helpfully pictured as a series of concentric circles. The central circle, the smallest one, is the worldview core, a set of non-negotiable presuppositions, beliefs, and stories without which the worldview collapses.... The outer two circles... represent increasingly flexible (negotiable) worldview beliefs.... The peripheral circle of worldview beliefs represents the most disposable or alterable elements of the worldview. Beliefs that fall in the outer two circles, outside the core, can be altered or replaced without affecting the overarching worldview" (Anderson, 2017:45-46).

3.10.2 Efficiency of the written word of God

This measures the extent of the church's worldview propositional and narrative transformation (conversion to and adjustment within) the Christian theism versus the cost. Cost can be in terms of time, space, matter, and energy. Through the propositional-narrative written word of God, the personal ascended word of God guarantees that the church is maximally efficient in accomplishing Christoformity: liberation, sanctification, and glorification.

3.10.3 Efficacy of the written word of God

This measures the extent of the Church's contribution to the higher-level system's purposes of self-glorification. The higher-level system is the personal word, the ascended Jesus Christ. Through the propositional-narrative written word of God, the personal ascended word of God guarantees that the church is maximally efficacious in accomplishing Christoformity: liberation, sanctification, and glorification.

Table 1 Measures of performance and written word of God

Measures of performance	Written word of God
1. Effectiveness	Actual Christoformity
2. Efficiency	Low-cost Christoformity
3. Efficacy	Glorifying Christoformity

3.11 The written word of God: General control problems

The written word of God, breathed out by the Holy Spirit⁸⁵ and written in letters by the prophets and the authoritative apostolic band, establishes and maintains the church in three ways: being, behaving and becoming⁸⁶. As the embedded authoritative divine direction within the church, the written word of God solves three church problems: existence, obedience, and transformation.

⁸⁵ *Theopneusty* – "God-breathed"; divine inspiration, particularly pertaining to the role of the Holy Spirit in the creation of the Scriptures" (Horton, 2006:698).

⁸⁶ It should be noted at the outset that the authoritative apostolic band was to be the model of these functions for the Christian congregations. If the band was full of sin and hypocrisy in the perception of the apostolic church, it would never have been able to properly address these functions in the apostolic age church with authoritative divine direction. The written word of God, modelled after the authoritative apostolic band (who themselves were modelled after the personal incarnate word of God), would have to: be, behave as, and become the authoritative divine direction that could effectively, efficiently, and efficaciously communicate God's will to found and maintain the church.

3.11.1 Church existence

The propositional-narrative written word of God communicates the life-giving, revealed truth of the incarnate, personal word of God in authoritative apostolic epistles (letters), bringing order and resisting/minimising disorder. The written word of God enables church to start and to continue to 'be' or exist as a new creation. The written word of God guarantees that church is ultimately Christlike in her existence: holy, liberated, and glorified.

3.11.2 Church obedience

The propositional-narrative written word of God instructs church on how to behave, that is, operate or function in the created order regardless of changing theological, philosophical, and societal conditions and disturbances. The written word of God guarantees church acts in a way that is Christlike in her obedience: holy, liberated, and glorious.

3.11.3 Church transformation or metamorphosis

The propositional-narrative written word of God transforms church, helping it become, that is, develop into the mature Christ (Eph. 4:13-15). This happens as the written word of God removes bad goals (sin: unholiness, bondage, and dishonour), and preserves good ones (love: liberty, holiness, and glory) in church: "God uses Scripture not only to inform his people but also transform them" (Cole, 2020:38). In contrasting the Old and New Testament concepts of 'holiness', Bray (2016:143-144) says, "The boast of Christians was that theirs was the true spiritual holiness, a commitment of heart and mind and not the outward observance of essentially meaningless rituals". Jones (2017:35-36), explaining the fruit of the Spirit:

Love is often love because it is patient kindness. In Galatians 5, Paul is saying that our love must be joyful love, patient love, peaceful love, faithful love, gentle love, and so forth. Our patience is joyful patience. In this way, when we manifest the fruit of the Spirit, we model in some sense God's simplicity.

The written word of God guarantees that the church manifests in a way that is Christlike in her transformation: holy, liberated, and glorious. The written word of God solves all three of these problems for church by being the influential, embedded authoritative divine direction guaranteeing accordance with the will of God for Christoformity (liberty, holiness, and glory). To exercise a controlling influence on church, the written word of God defends against competing deceptive worldview propositions and narratives. This is the role of apologetics. Cole (2020:75): "Christians are to share not only what they believe but also why they believe

it when challenged to do so. Defending the faith is Christian apology, and such a defence requires a reason (*Logos*, 'word,' 'reason')”.

Table 2 General control problems and written word of God

General control problems	Written word of God
1. Being	Births church (the congregation of God's people)
2. Behaving	Regulates church
3. Becoming	Transforms church

3.12 Dogmatic Theology: Cybernetics

The written word of God, by cybernating Dogmatic Theology in propositional form, provides divine communication, a divine-human feedback cycle and divine control to the church. Dogmatic Theology is the propositional means that the written word of God communicates divine truth to the head, divine values to the heart, and divine practical advice for the hands. The divine-human feedback cycle will check on the truth, spirituality, and existential/practical output of the church, correcting it propositionally. The written word of God can increasingly control the head, heart, and hands of church, through Dogmatic Theology propositions. This forms an integrated whole intended to perform the divine function of Christoformity: liberation, sanctification, and glorification, in service to the written word of God.

Sanctification, which is increasing conformity to the image of Jesus Christ, can be understood as progressive knowledge of God (orthodoxy or theology proper or Christlike knowledge of God) resulting in a holistic Christian theism worldview. This in turn results in a heart that is increasing in orthokardia (a Christlike heart), and actions resulting in increasing orthopraxy (Christlike behaviour). The means of this sanctification is from edification which comes by the written word of God as it is communicated. Dogmatic Theology is the servant of the authoritative divine direction for the post-creedal Christian theism worldview.

The Christian theism worldview, the latter of which Sire summarises as “A Universe Charged with the Grandeur of God” corresponds with dogmatic theology propositionally and biblical theology corresponds with the Christian theism worldview narratively. Sire, in describing God as “prime reality” (2009:28-31) includes a robust list of divine attributes: God is infinite, personal, transcendent, omniscient, sovereign, and good. Consequently he (31) describes the Christian worldview position on external reality as: the cosmos God created ex nihilo to operate with a uniformity of cause and effect in an open system. This conviction of creation

being an open system facilitates our construction of the doctrine of *creatio ex nihilo*. It is also an important subject in cybernetics and GST.

In as much as it aligns with and reflects the written word of God, Dogmatic Theology directs the church. Calvin described sacred teaching, found in the written word of God, as the sceptre that Christ uses to rule the church (Cole, 2020:33). Dogmatic theology, as a servant of the authoritative divine direction, is a set of interacting dogmas and doctrines, distilled from and reflecting the purpose of the written word of God. "Doing theology needs a secure epistemological base. God's word written is that base" (37). Cole (15-16) explains that transitioning from the written word of God to Dogmatic Theology is fundamental to answer three questions. All three categories are relevant to the science of Dogmatic Theology:

3.12.1 The 'head': truth

What ought we to believe? This is orthodoxy or right opinion.

3.12.2 The 'heart': spirituality

What ought we to value? This is orthokardia or right-heartedness.

3.12.3 The 'hands': existential/practical

How ought we to live? This is orthopraxy or right practice of life.

3.13 Dogmatic Theology: Worldview

A worldview is a whole conceptual system composed of eight interrelated and interdependent propositions and narratives. A Christian worldview is a cohesive truth position presented as a systematic response to the main questions facing humanity. The worldview a person holds will be their heart's answer to the following questions:

1. What is prime reality – the real?
2. What is the nature of external reality, that is, the world around us?
3. What is a human being?
4. What happens to a person at death?

5. Why is it possible to know anything at all?⁸⁷
6. How do we know what is right and wrong?
7. What is the meaning of human history?
8. What personal, life-orienting core commitments are consistent with this worldview?
(Sire 2009: 22-23)

Depending on the combinations of the many answers to these questions, Sire catalogues the main worldview responses to these questions. These are all competing systems. Although there can be some overlap in individual answers, the worldviews, overall, are mutually exclusive:

1. Christian Theism
2. Deism
3. Naturalism⁸⁸
4. Nihilism (technically not a worldview)
5. Existentialism⁸⁹
6. Eastern Pantheistic Monism
7. The New Age – Spirituality without religion
8. Postmodernism⁹⁰
9. Islamic Theism

In essence these worldviews are the most common examples of the nine composite “hearts” that people can have as their core personal convictions.

⁸⁷ Epistemology – “The study or theory of the nature of knowledge, its validity, its limits, our methods of obtaining it” (Horton, 2006:687).

⁸⁸ Naturalism – “A system of belief that denies validity to all but material (natural) explanations of reality. The possibility of the supernatural (including revelation) is categorically excluded” (Horton, 2006:692).

⁸⁹ Existentialism – “A theological or philosophical model that stresses subjective experience over abstract reason” (688).

⁹⁰ Postmodernism – “A worldview that is skeptical of absolute truths or universal principles in favor of relativity and individual experience. In this view, no single answer or paradigm suffices for all cultures or individuals; reality is subject to individual interpretation” (695).

3.13.1 Worldview and 'heart'

These hearts are composite systems of propositional and narrative answers residing, flourishing, and multiplying within all human beings. These are the nine major paradigms available and will determine how we interpret reality. Christian theism, in propositional form, is the worldview necessary to construct the Dogmatic Theology system as well as the worldview, in propositional form, that it produces. Once it is constructed, the Dogmatic Theology system, through apologetics, intends by persuasion, to bring these other eight worldview hearts in propositional alignment with itself.

These other paradigms (even those that are not theistic) can be understood as alternative metaphysical, ontological, and epistemological 'theologies' and 'philosophies'. Dogmatic Theology intends to address the other worldviews 'outside the boundary/environeer' by applying corrective apologetics to them. Internally, Dogmatic Theology is debated on non-essentials or negotiables through the activity of 'polemics'.

Allowing for these common questions facilitates worldview comparison. Christian theism as a worldview competes with other worldviews in an open economy of ideas. The Christian theism worldview is a theological system competing with other worldviews. It articulates clear answers to each question and each question is related to all the others.

Depending on the question, a worldview can have elements that are mutually exclusive. For example, the Christian theism worldview believes in an open universe whereas the naturalism worldview believes in a closed universe. Each one heads in opposite directions based on their commitment to the universe being either open or closed. The Christian theism worldview, like all worldviews, must pass all three truth tests. Other worldviews will not.

3.13.2 Worldview system versus aggregate

Is every composite theological/philosophical conceptual collection a system? We should distinguish between the worldview **system** and worldview aggregate. In the coming chapters we will be constructing a whole dogmatic theology conceptual system. It is my experience and conviction that Dogmatic Theology is not an aggregate (where the individual dogmas and doctrines would have no relationship to the whole or to each other). If something is not a worldview, it is not a system and thus it is a conceptual 'aggregate'. For example, Sire (2009:94) classifies nihilism in this way:

Nihilism is more a feeling than a philosophy, more a solitary stance before the universe than a worldview. Strictly speaking, nihilism is a denial of any philosophy or worldview – a denial of the possibility of knowledge, a denial that anything is valuable. If it proceeds to the absolute denial of everything, it even denies the reality of existence itself. In other words, nihilism is the negation of everything – knowledge, ethics, beauty, reality. In nihilism no statement has validity; nothing has meaning. Everything is gratuitous, *de trop*, that is, just there.

And so, nihilism is an aggregate and not a worldview system. The latter is composed of propositions, which are necessary, whereas a worldview aggregate is a collection of propositions that have no relationship to a greater system. A set of propositions, all of which do the same thing, or all teach different facts without any kind of unity is not a worldview.

3.13.3 Creator-creature distinction

All theological thought (whether the Christian theism worldview or dogmatic theology) rightly begins with the central dogma of the triune God and then move on to the remaining doctrines. Cole uses the dogma of the triune God as the key case in point whenever referring to an example of a teaching in Christian thought. “In the biblical account of creation, the distinction between the Creator and the creature is never compromised” (2020:61).

This is a natural noetic⁹¹ progression of the human mind: if God is uncreated, simple⁹² and necessary while almost everything we know and experience is created, composite, and contingent, the existence of the one logically implies the existence of the other. The two ideas arrive as a pair, even though they can be understood somewhat in isolation, and one takes priority over the other.

Once we are aware of the two categories of being (namely, necessary versus contingent being), it automatically follows that we seek to deduce what (if any) the relation between the two entities is.⁹³ Wellum (2021:37) puts it this way: “God is the triune Creator-covenant Lord.... This truth establishes the central distinction, which eliminates any pantheistic or panentheistic

⁹¹ Noetic – “Relating to rational or intellectual activity” (Horton, 2006:694).

⁹² God is not composed of parts, substance and accidents, potentiality, and act, being and essence (Swain, 2020:54-59).

⁹³ For example, do we choose deism – “the Creator is distant and disinterested in creation” (Horton, 2006:686) or theism - the creator is related to creation as a musician is in relation with their instrument (see Dembski’s *The Patristic understanding of Creation: an anthology of writings from the Church Fathers on creation and design.*)? In the latter, God shows immanence – “his pervasive presence in all creation” (689).

views of the God-world relationship. God alone is God; all else is creation and depends totally on him for life and everything”.

3.14 Dogmatic Theology: Worldview throughput

Dogmatic Theology, as church worldview regulator, has a three-stage process, together called throughput: input, transformation, and output.

3.14.1 Dogmatic Theology: Worldview input

Partially or totally false propositions and narratives in the worldview milieu surrounding the Dogmatic Theology system 'enter' it from the relevant environment. The way this happens is that a person's worldview or heart or reason is confronted propositionally by the dogmas and doctrines within Dogmatic Theology. The heart will already have its own answers in propositional form to these four fundamental questions, whatever the human heart answers to these questions are, they will be drifting in the relevant environment.

1. What is our nature?
2. What is our world?
3. What is our problem?
4. What is our end? (Anderson, 2017:19-21).⁹⁴

3.14.2 Dogmatic Theology: Worldview transformation

The written word of God and Holy Spirit sanctify, liberate, and glorify with **truth**. Dogmatic Theology has truth in the form of propositions: dogmas and doctrines. The worldview or heart is confronted with Christian theism propositions. The heart or reason faces a choice to reject, accept or amend the partially or totally false propositions to align with Dogmatic Theology propositions, leading to either rejection, acceptance, or amendment of the Christian theism worldview.

The source of these dogmas and doctrines within Dogmatic Theology are the distilled propositional truths of the written word of God, especially concerning the three perichoretic

⁹⁴ It should be noted that the Rule of Faith as a precursor to the creeds and dogmatic and biblical theology was established to refute early theological challenges to the Christian faith from heterodox groups which attacked these biblical doctrines: creation, Scripture, salvation and Christ (Kruger, 2017:134)

dogmas about the natures and persons of the triune God and Jesus Christ and soteriology⁹⁵, yet not excluding others. For example, the summarised Christian theism answers to the abovementioned worldview questions and answers are:

1. What is our nature?

Human beings created in the image of the triune God⁹⁶ (Naugle, 2017:153-159).

2. What is our world?

“Our world is created, fallen, and redeemed, and one day it will be glorified” (160-164).

3. What is our problem?

Sin which results in living in a fallen world (164-171).

4. What is our end?

Our telos or meaning and purpose is two-fold: life before death and life after death. They both have the same general objective: God’s glory. The final state for Christians is eternal embodied life with God (171-177).⁹⁷

3.14.3 Dogmatic Theology: Worldview output

Dogmatic Theology propositional truths cause transformation of the worldview, propositionally and so produces the Christian theism worldview in propositional form. Dogmatic Theology: worldview output can be of two kinds: useful to the higher system (the ascended Jesus Christ) or waste. Useful output would be the Christian theism worldview in propositional form that glorifies Jesus Christ. Worldview waste would be expelled propositions⁹⁸. The apostle Paul expresses this sentiment in Philippians 3:8: “I now regard all things as liabilities compared to the far greater value of knowing Christ Jesus my Lord, for whom I have suffered the loss of all things – indeed, I regard them as dung! – that I may gain Christ” (NET). The input to one system may be the output from the subsystem: this explains how the Christian theism

⁹⁵ “Anyone united to Christ by the power of the Spirit in this life has the privilege of remaining so in the life to come” (Jones, 2017:213-214).

⁹⁶ “The apex of creatures is humankind created to image God... The purpose of this image is to represent the living God by relating to him and exercising godlike functions” (Cole, 2020:54-55).

⁹⁷ “Matter has a destiny in the transfigured new heavens and the new earth” (57).

⁹⁸ More broadly, these could be listed as: commitments, narratives and presuppositions, assumptions, and foundations (Sire, 2009:20-22).

worldview develops over time. For example, incorrect beliefs in one of the dogmas may be inputted and transformed or processed by the higher Dogmatic Theology system.

3.15 Dogmatic Theology: Divine communication

Cybernetic ideas of information, feedback, and control within systems can be applied to the discipline of Dogmatic Theology. Dogmatic Theology cybernetics articulates these concepts propositionally as: divine communication (special revelation), divine-human relations (mutual indwelling), and divine control (shepherding, or Lordship). Dogmatic Theology as cybernetic system in service to the authoritative divine direction of the personal and written word of God, is essentially concerned with the transmission and interpretation of divine revelation in propositional form.

Divine revelation in the written word of God is distilled into Dogmatic Theology propositions and is used by the church to direct it towards a pre-set goal: **Christoformity**. Dogmatic Theology, communicating the personal and written word of God in propositional form and acts to restore stability in creation and church. The written word of God infers design since it is information from an intelligent source. Dogmatic Theology clearly communicates truth about what we should believe, the right opinions to hold to. It is also clearly communicating spirituality about what we should value, the right orientation of our hearts. Lastly, it clearly communicates existential and practical issues about how we should live, the right practices of life. Dogmatic Theology, as a servant of the written word of God, exhibits the properties of information albeit in propositional form: contingency, complexity, and specification.

3.15.1 Contingency

Dogmatic Theology propositions are not the result of an automatic (unintelligent) process. Rather, it is produced by the Holy Spirit working through intelligent human beings under his direction.

3.15.2 Complexity

Dogmatic Theology propositions are too complex to have been produced by chance.

3.15.3 Specification

Dogmatic Theology propositions withstand scrutiny (they are robust, but not necessarily indestructible) since they are clearly the product of intelligence which exhibits patterns.

3.16 Dogmatic Theology: Divine-human relations

The personal and written word of God, act to restore stability in the church. Divine communication in propositional form found in Dogmatic Theology is used by church to direct it towards a pre-set goal of ultimate Christoformity: complete liberation, sanctification, and glorification.

Church, as a divine closed-loop system, is regulated by dogmatic propositional feedback and dogmatic propositional feedforward mechanisms found in dogmatic theology. Dogmatic propositional feedback is a strategy that allows church to adjust to unexpected worldview disturbances. It is based on actual rather than expected performance of church. It is actuated by propositional errors (that is, sin) in creation and church and it corrects a deteriorating creation and church, bringing life and renewal.

3.16.1 Divine propositional feedforward

Divine propositional feedforward is anticipatory which means it produces a divinely predicted and divinely desired state in the future of the worldview of church. The worldview of the living system (church) in propositional form is adjusted to a future state which does yet exist – glory. Dogmatic propositional feedforward occurs before an event occurs. God prepares church for future possible outcomes. The way He prepares church is by providing propositional information about the church's expected behaviour (that is, holiness). From there He simulates the actual processes. For this reason, dogmatic propositional feedforward is goal-directed or teleological for church. The divine goal is built into church models which transform divine revelation about predicted futures (prophecy: foretelling) into propositional changes in the state of the present system (prophecy: forthtelling).

3.16.2 Divine negative propositional feedback

Divine negative propositional feedback in church restores the church's worldview to normal by correcting sinful propositional deviations to re-align with the predetermined goal of Christoformity. If the church does not have negative feedback its stability disappears. In other words, without negative feedback church becomes unstable. The way this instability manifests is that the boundaries between church's Christian theism worldview in propositional form and its relevant environment (the world of competing propositional worldviews) start to disappear. Once they completely disappear church's Christian theism worldview will cease to exist.

Divine negative propositional feedback opposes the propositional worldview a deviant church is producing. More negative propositional feedback will thus result in less output as the church's Christian worldview in propositional form is corrected and stabilised. The Scriptural term for this is 'renewing of the mind'. Dogmatic theology will provide negative feedback in propositional form to assist us when our 'head', 'heart', and 'hands' are producing worldly things. It will correct the head when it is not believing truth and believing lies. It will help correct us from heterodoxy to orthodoxy. It will correct the heart when it is not valuing proper spirituality and valuing things of the flesh. It will take us from 'heterokardia' to orthokardia. It will correct our hands when they are not practicing properly. It will take us from 'heteropraxy' to orthopraxy.

3.16.3 Divine positive propositional feedback

Divine positive propositional feedback is temporary and results in a 'runaway' effect. Before the process explodes and destroys the whole church the self-accelerating loop is usually halted.

3.17 Dogmatic Theology: Divine control

Divine control in Dogmatic Theology can be defined as a goal-directed influence toward a predetermined end of orthodox Christian theism with a continuous comparison of the current state of the Church's worldview to the future goal of Christoformity. Divine control is God's benevolent guiding influence on the church's worldview. Part of the process of Christoformity (liberation, sanctification, and glorification) is an increasingly orthodox (Christian theism) worldview. Kruger summarises the two-fold role of the New Testament core canon, the source of Dogmatic Theology and the Christian theism worldview propositions: "This core (collection of texts considered Scripture by the second century) not only guided the Church in her battles with various second-century heresies, but it would become the foundation for the Church's doctrinal discussions in years to come" (2017:203, parenthesis mine).

Dogmatic Theology is goal-directed as it makes sure that church is conformed to truth, spirituality and practical activity. Dogmatic Theology is influencing what the church believes and values, and how it lives. Dogmatic Theology has the purpose of propositionally establishing right opinions, hearts, and lives. The means of this sanctification, liberation and glorification is edification which comes by the written word of God as it is communicated in propositional form through Dogmatic Theology. Dogmatic Theology is a worldview propositions control system for church.

The primary purpose of divine control through Dogmatic Theology is to influence the church's worldview in propositional form as a programmatic shepherd. Divine worldview control is not inherent to church. It is the goal-directed divine influence upon the church's Christian theism worldview. In Dogmatic Theology cybernetics worldview control is:

1. Divine communication (special revelation) processing into propositional form.
2. Church worldview propositional programming.
3. Propositional worldview decision.
4. Reciprocal divine-human propositional communication.

A divine worldview propositional program in Dogmatic Theology cybernetics can be defined as: coded or prearranged worldview propositions that control a church process or behaviour leading it toward the given end of Christoformity.

Since a teleonomic process like Christoformity (liberation, sanctification, and glorification) is always guided by a divine worldview propositional program, church propositional worldview adaptation and development requires perpetual reprogramming. The reprogramming is by means of authoritative divine direction. This is the written word of God as articulated through propositions in Dogmatic Theology influencing the Christian theism worldview in a propositional form.

It may also be useful to have a working definition of a divine algorithm. Through divine worldview propositional control by means of dogmatic theology, the church has a divine algorithm which together the personal word and the Holy Spirit use as 'instructions' to accomplish the task of glorification. Since we are humans, we can respond non-algorithmically to the overarching command of the written word of God to submit oneself completely to the personal and written word of God to reap its transformational benefits: liberty, holiness, and glory⁹⁹. Although dogmatic systems are - unlike the Scripture - fallible means for this task, they are useful.

⁹⁹ There is a difference between what a dogmatic system is intended to accomplish, and what it really accomplishes. All dogmatic systems are based on naturally fallible human interpretations of Scripture and therefore are susceptible to human error (despite the infallibility of the Scripture itself and guidance by the Holy Spirit).

3.18 Dogmatic Theology: Measures of performance

Dogmatic Theology is the measure of church's worldview, in propositional form, by being the cybernetic influence serving the embedded authoritative divine direction of the written and personal word of God. Since Dogmatic Theology is cybernetic it measures performance in the system it serves: church (that is, the congregation of God's people). It regulates the church worldview by using the following three measures of performance: effectiveness, efficiency, and efficacy.

3.18.1 Effectiveness of church worldview

This measures the extent of the transformation of the church's worldview into alignment with the written word of God. Through Dogmatic Theology propositions, and biblical theology narratives and themes, the written word of God guarantees that church is maximally effective in accomplishing orthodoxy, orthokardia, and orthopraxy in the transformation of her worldview.

3.18.2 Efficiency of church worldview

This measures the cost of the transformation of the church worldview into alignment with the written word of God. Through Dogmatic Theology propositions, and biblical theology narratives and themes, the written word of God also guarantees that church is maximally efficient or cost effective in accomplishing orthodoxy, orthokardia, and orthopraxy in the transformation of her worldview.

3.18.3 Efficacy of church worldview

The higher-level system, as stated previously, is the ascended personal word of God. He measures the result of the transformation on the system above. Finally, through dogmatic theology propositions, and biblical theology narratives and themes, the written word of God guarantees that church is maximally efficacious in accomplishing orthodoxy, orthokardia, and orthopraxy in the transformation of her worldview, to the glory of the Jesus Christ¹⁰⁰.

Table 3 Measures of performance and Dogmatic Theology

Measures of performance	Dogmatic Theology
1. Effectiveness	Births Church's worldview
2. Efficiency	Regulates Church's worldview

¹⁰⁰ He, in turn, brings glory to the triune God.

3.19 Dogmatic Theology: General control problems

Dogmatic Theology solves all three general control problems for church by being the servant of the embedded cybernetic influence of both the personal and written word of God. Since Dogmatic Theology is cybernetic it solves control problems in the system it serves: the church. As an embedded control, Dogmatic Theology serves the personal and written word of God, assisting in solving three problems: existence, obedience, and transformation.

3.19.1 Church existence

Dogmatic Theology helps birth and maintain the orderly internal worldview propositional structure of church by resisting the disorder from deceit and heresy in the form of competing worldview propositions. Through Dogmatic Theology propositions, and biblical theology narratives and themes, the written word of God incrementally manifests a church that is ultimately Christlike in her existence: holy, liberated, and glorified. Dogmatic Theology forms and nurtures truth, spirituality, and practices in the worldview of the church.

3.19.2 Church obedience

Dogmatic Theology helps the personal and written word of God in completing the goal of the Christian theism worldview formation, in propositions, despite the surrounding milieu of competing worldview propositions. Through Dogmatic Theology propositions, and biblical theology narratives and themes, the written word of God guarantees church acts in a way that is Christlike in her obedience: holy, liberated, and glorious. Dogmatic Theology solves the problems of wrong opinions, wrong-heartedness, and wrong life practices in the worldview of the church.

3.19.3 Church transformation

Dogmatic Theology helps transform church by removing bad goals from its worldview and preserving good ones in it, in propositional form. Bad worldview goals are those that are not in alignment with the personal¹⁰¹ and written word of God whereas good worldview goals are. Through dogmatic theology propositions, and biblical theology narratives and themes, the

¹⁰¹ The personal word of God is Jesus Christ (John 1:1) and the written word of God is the Bible. They are always in alignment, but are distinguishable entities.

written word of God guarantees church manifests in a way that is Christlike in her transformation: holy, liberated, and glorious. Dogmatic Theology changes church's 'head', 'heart', and 'hands' by removing lies, incorrect spirituality, and wrong practices while simultaneously preserving good opinions, heart-orientations, and life practices in church's worldview.

Table 4 General control problems and written word of God

General control problems	Written word of God
1. Being	Births church
2. Behaving	Regulates church
3. Becoming	Transforms church

3.20 The written word of God and GST

Applying the system principle to the written word of God we can state that the whole written word of God is greater than the sum of its 'parts', that is, the covenants in testament form. The written word of God is not only cybernetic, but it is cybernated. It does not only exhibit information, feedback, and control, it is also subject to a higher order cybernetic influence. This means it is open, bound, hierarchical, and emergent/design pattern/downward causation.

Cole (2020:61) notes that the Christian mind has a "sacramental cast, which means the human experience of beauty... can be an intimation of heaven and its glory". Dogmatic and Biblical Theology shows truth¹⁰², goodness and beauty is present in the written word of God as a whole.¹⁰³ "God's holiness is his beauty" (Jones, 2017:165). He summarises: "God loves beauty and life, but he loves them both internally and externally. In heaven both our inner beauty and life and our outer beauty and life shall harmonise perfectly. That is true for Christ now, and it will be true for us in the future" (209). The written word of God, as servant of the personal word of God, has theological constancy over time and theological goal-directedness. It models and celebrates order, pattern, and purpose. Its purpose is the reason it exists and that is how to measure its functional success: does it result in Christoformity (liberation, sanctification, and glorification)?

¹⁰² John 14:17 Christ refers to the Holy Spirit as the Spirit of truth (Jones, 2017:41)

¹⁰³ In the series preface to the *Short Studies in Biblical Theology* Ortlund and Van Pelt define the Bible according to the biblical theology definition as, "theologically unified, historically rooted, progressively unfolding, and ultimately Christ-centered narrative of God's covenantal work in our world to redeem sinful humanity".

3.20.1 Order, pattern, and purpose in the written word of God

Biblical theology reveals the order, pattern¹⁰⁴, and purpose of the written word of God as nested progressive covenants and traditions (Laniak, 2006:24), finally culminating in Jesus Christ's new covenant. Dogmatic Theology reveals the order of the written word of God in terms of the creator-creature distinction and relation (through divine missions).

Table 5 System design and written word God

System design	Written word of God
1. Order	Covenantal order
2. Pattern	Covenantal pattern
3. Purpose	Covenantal purpose

The written word of God informs us of its purpose. Serving the triune God's purpose, the written word of God's purpose is the reason it exists and indicates how to measure its functional success: "All Scripture is God-breathed and is useful for teaching, rebuking, correcting and training in righteousness, so that the servant of God may be thoroughly equipped for every good work" (2 Tim. 3:16-17, NET). In other words, the Bible's purpose is to achieve Christofornity: to sanctify, liberate, and glorify. Special revelation (the written word of God) and redemption are bound together in God's purposes and so they are inextricable in Scripture (Thompson, 2022:129). Timothy Ward says the written word of God is a redemptive act and is related to the purpose for which the Bible was given. The unchangeable character of God's purpose is related to the Lord watching over his written word to perform it (147). Unlike a goal or objective, the written word of God's final purpose (absolute Christofornity: liberation, sanctification, and glorification) is relentlessly pursued but is ultimately unattainable. In addition to showing organisation, to qualify as a system the written word of God must have these attributes: continuity of identity, and goal-directedness/teleology.

3.20.2 Continuity of identity

This is the preservation of the structure of the written word of God, amid changes. For example, the history of the canon shows the origin, use, and acknowledgement of the New Testament since its writing by the authoritative apostolic band and their close associates in

¹⁰⁴ In the series preface to the *New Studies in Biblical Theology* D.A. Carson lists one of the contributions of the series as being "the delineation of a biblical theme across all or part of the biblical corpora" – that is, a pattern.

the first century to the consensus in the fourth century. Since that time the identity of the written word of God has continued through preservation¹⁰⁵.

3.20.3 Goal-directedness/teleology¹⁰⁶

The written word of God promises liberation, sanctification, and glorification of creation and church. Nested covenants communicated in the Old and New Testaments have the same goal of actualising truth, goodness, and beauty in the church¹⁰⁷. Goal-directedness or teleology of the written word of God is a result of it being divinely cybernated. The written word of God is 'God-breathed' and written by divinely appointed representatives: the authoritative apostolic band and their close associates.

Table 6 System design and written word of God

System design	Written word of God
1. Continuity of identity 2. Preservation of 'structure' amid changes 3. Constancy over time	One canon.
1. Goal-directedness 2. Teleology	One goal of glorification.

3.20.4 The written word of God: Behaviour

Systems are understood by their behaviour. To qualify as a system, the written word of God must satisfy three behavioural conditions:

1. Behaviour of each testament and covenant effects the behaviour of the whole written word of God. For example, prophecies and types in the Old Testament are fulfilled in the New Testament, effecting the way the written word of God 'behaves' as sacred literature.

¹⁰⁵ "The preservation of Scripture needs to be seen as yet another example of the generosity of God in his communication with his human creatures. It is not a human achievement but an act of divine grace" (Thompson, 2022:117).

¹⁰⁶ Teleology – "A way of explaining nature in terms of divine purpose and design; the teleological argument for God's existence posits that nature's evident purpose and design require a Designer" (Horton, 2006:698).

¹⁰⁷ "There's nothing more genuinely artistic than to love people," said Vincent van Gogh" (Ramsey, 2022:v).

2. Behaviour of the Old and New Testaments and covenants and their effects on the whole written word of God are **interdependent**. For example, the Old Testament prophecies and types are dependent on the New Testament fulfilment and antitypes, and vice versa.
3. In whatever way each of the subsystems are formed (nested old and new covenants) and (Old and New Testaments composed of the various genres or other ways of grouping the books together), all influence the behaviour of the whole written word of God. They are not independent (which would mean no effect). For example, creation, Noahic, Abrahamic, Mosaic, Davidic and new covenants all communicate the same truth of a God who covenants with humanity. Likewise, a minor group of New Testament books (the Johannine Epistles) must be in harmony with the Old Testament Pentateuch. The Johannine Epistles will communicate the same message as the Pentateuch. For example, 1 John 2:19 has the same message as Deuteronomy 13:13, 1 John 3:12 references Genesis 4:4 & 8., and 1 John 3:17 is nearly a word for word quote of Deuteronomy 15:7.

The behaviour of the written word of God is observable by its output. The word of God, although not merely physical but also informational, will exhibit behaviour, since it has conceptual output: it is written. The written word of God's behaviour is its set of attributes. Thompson (2022:122) lists them as:

1. Clarity
2. Truthfulness
3. Sufficiency (material and formal)
4. Efficacy

3.20.4.1 Clarity

Thompson (2022:125) defines the attribute of Scripture's clarity or perspicuity as: "that quality of the biblical text that, as God's communicative act, ensures meaning is accessible to all who come to it in faith." God is a communicating Being par excellence (61-86) and so we should expect his communication, in the form of the written word, to be accessible. Therefore, the meaning of the text of Scripture is accessible, making 2 Timothy 3:15-16 possible. Titus 1:9 implies clarity and defensibility of the written word of God is available to church leadership. God's presence in and with the written word of God gives it clarity therefore a lack of clarity would imply that God is unable and/or unwilling to reveal himself plainly to humanity (130). Pictet connects God's benevolence to clarity while Webster states the written word of God is clear because God is clear (130-131):

Precisely because God continually attends Scripture, so that it is not read in his absence or 'behind his back', as it were, Scripture accomplishes its purpose and shines the light of the gospel. Clarity is not a natural property of the Bible as a text. But Scripture is God's communicative act, and so it bears the marks of his character. It is the written word of the God who is like this.

3.20.4.2 Truthfulness

The written word of God behaving in a way that exhibits truthfulness is associated with the theological terms: infallibility and inerrancy (141). These terms were used interchangeably historically (142). The written word of God being truthful is foundational for its reliability. Reliability is in turn foundational for people to trust it and be saved. The person and work of Jesus Christ (the incarnate word of God) is all about truth (144) and so with the written word of God the attribute of truthfulness is grounded in the person and character of God himself: God is truthful and trustworthy and so should his word be. He is not deceitful and he 'never lies' (146). The basis for the doctrine of biblical inerrancy is located both in God and in the Bible's teaching about itself. The Bible must be both true and trustworthy if it is the word of God we know as 'the God of truth' (148).

3.20.4.3 Sufficiency

The written word of God has the attribute of sufficiency which means it is perfect (157). Once again, this is related to the divine character of the author (158). Sufficiency is about the use of the written word of God – is it enough for us? Does the written word of God make a difference? By starting with Jesus Christ and his own use of the Old Testament, it directed the attitude of the authoritative apostolic band. Since Jesus appealed to the Old Testament as justification, He was connecting the written word of God to the incarnate word of God's person and work. In turn the authoritative apostolic band wrote about the sufficiency of the written word of God in 2 Timothy 3:15 (159). The written word of God is sufficient to save a person. The divine inspiration of the written word of God guarantees that it is sufficient for the functions listed. According to 2 Peter 1:3-4 through the written word of God He has provided enough for life and godliness.

I can pray this because his divine power has bestowed on us everything necessary for life and godliness through the rich knowledge of the one who called us by his own glory and excellence. Through these things he has bestowed on us his precious and most magnificent promises, so that by means of what was promised you may become

partakers of the divine nature, after escaping the worldly corruption that is produced by evil desire.

Here we see the problem-solving function associated with all cybernetic influence applicable to the divine power within believers. The embedded divine power provides all we need for life and godliness, through knowledge of Christ (which comes to us through the written word of God):

1. Being – life
2. Behaving – godliness
3. Becoming – partaking of the divine nature

Thompson (160-161) quotes Grudem's definition of the sufficiency of the Written Word of God: "The sufficiency of Scripture means that Scripture contained all the words of God he intended his people to have at each stage of redemptive history, and that it now contains everything we need God to tell us for salvation, for trusting him perfectly, and for obeying him perfectly." The written word of God is sufficient at every stage of history¹⁰⁸, as God provides for his people. Although this attribute of Scripture is again based on the person and character of God, God's self-sufficiency is different to Scripture's. God is self-existent (aseity), and the written word of God (a created entity) is not (161). Scripture is a creature of God's will. The written word of God expresses his character and is not an extension of his being. God has both the capacity and will to provide humanity a text sufficient to accomplish his purpose: "God creates and communicates with his creatures in acts of grace. His involvement of the genuine agency of human creatures to proclaim his character and purpose to other human creatures is likewise an act of grace" (162). Thompson continues:

Scripture is sufficient for the task(s) for which God has designed it. The Spirit attends Scripture at every point, from its writing to its reception, but this is not because of a deficiency in Scripture. Scripture is sufficient to teach, to promise and warn, to command or invite, and to elicit faith and nourish it in those brought to new life in the Spirit (162).

Timothy Ward provides a useful explanation (162-163). Two aspects of sufficiency of the written word of God affirmed in the history of Christian doctrine: material and formal. Material

¹⁰⁸ Clearly, revelation is progressive.... Revelation through the Son is the climax of a revelatory process (Cole, 2020:58).

sufficiency means that the written word of God contains everything a person needs to know for salvation, and to live in a way which pleases God, whereas formal sufficiency relates to the authority by which the written word of God can be exegeted and asserts that the written word of God is self-interpreting. Material sufficiency is the written word of God's 'completeness' or 'perfection'. In other words, the written word of God does not need a supplement to accomplish its purpose. What is given to us in the written word of God is enough to make known to us the saving purpose of God in Christ, to warrant faith, and to direct the Christian life. This is the word that God through his Spirit has given to the church (163). Formal sufficiency is the same attribute as clarity. The written word of God interprets itself without dismissing the need for study and faithful teaching (163): diligent attention to the written word of God in context (comparing verses against one another) protects against misunderstanding.

3.20.3.4 Efficacy

Efficacy is the power of the written word of God to achieve its purpose which was evident the life and ministry of the incarnate word of God, Jesus Christ (169). As incarnate word of God, Jesus Christ appeals to the Old Testament power of the written word of God to direct and change lives (170). The written word is as powerful as the spoken word. The written versus spoken are two modes of the same thing: the word of God. The Old Testament accomplished the purpose of bearing witness to Christ. The powerful effect of God's word is a theme throughout the written word of God. The written word of God delivered by the Old Testament prophets accomplishes what God intends it to accomplish, whether salvation or judgement (171). The New Testament continues this same theme inherited from the Old Testament and the life and ministry of the incarnate word of God: Jesus Christ. The apostle Paul sees the written word of God as efficacious as the spoken word of God (172). The efficacy of Scripture is summarised by the writer to the Hebrews (173): "For the word of God is living and active and sharper than any double-edged sword, piercing even to the point of dividing soul from spirit, and joints from marrow; it is able to judge the desires and thoughts of the heart" (4:12).

The influence of the written word of God is enormous. This verse shows how the written word of God can expose what is deep within the human being. The written word of God is our spiritual sword (Eph. 6:17). The word of God is powerful enough to reorient the human heart (173). The power of the word of God, whether spoken, written or incarnate, has as its source

the omnipotent¹⁰⁹ triune God himself. God exercises power in creation and redemption easily. He uses words to do this, and the word is always attended by the Spirit (174).

3.20.5 The written word of God system structure: Progressive Covenantalism

The written word of God has two testaments: the old and New. Thompson (2022:123-124) states that the whole written Word of God is a covenant document. Kruger uses the term 'bicovenantal' (2013:150).

3.20.5.1 Old Testament

When God communicates it is often in the form of promises, conveyed and ratified in covenantal form. The covenant establishes a divine-human relationship applicable to the promises and requires an appropriate human response in the form of faith which manifests thereafter as obedience (Thompson, 2022:123). God's covenant is reiterated in Gen. 9:16; 17:2; Ex. 19:5; 2 Sam. 23:5) and the New Covenant is promised in Jeremiah 31:31-34. With the completion of the nested Old Covenant and Old Testament, the order, pattern, and purpose of the word of God was established as a design model.

3.20.5.2 New Testament

The New Testament constitutes the new covenant document itself (Thompson, 2022:124). According to Luke 22:20, Jesus Christ inaugurated the new covenant promised in the Old Covenant (123). With the completion of the new covenant and New Testament, the order, pattern, and purpose of the written word of God was made manifest.

The written word of God is cybernated by God Himself and so all covenants are interdependent. Through system design, which exhibits progressive order, pattern, and purpose, culminating in the New Covenant, the word of God resists unidirectional dependency of any covenant on another, and it resists independence of any covenant. When it comes to the structure of the written word of God there are three necessary properties in the covenants, they are in progressive order, pattern, and purpose:

1. The set of relations that exist between all covenants.

¹⁰⁹ Jones (2017:88-89) distinguishes between God's absolute and ordained power. The promises and prescriptions of Scripture relate to the latter which he has chosen as means of working.

2. The positional value of the arrangement of the covenants in relation to the whole written word of God.
3. The dimensional domain of the covenants of the written word of God.

These three structural properties of all systems help us distinguish between an aggregate and a system. With an aggregate there would be, for example, no 'positional value' in the relations between the nested covenants of the written word of God and thus no relation to the whole covenant story. In that situation you could read from either testament without any difference. "The Reformers of the sixteenth century had a high view of biblical authority and a way of interpreting Scripture that recognized its nature as the inspired word of God, rather than as a mere anthology of ideas about God in texts from ancient Israel and the early church" (Cole, 2020:38).

Since the written word of God is in the unique class of **special revelation**, that is, divinely communicated data, it must exist within a concrete system. For Christians, this concrete system is the written word of God in published form. As Bray (2009:60) summarises: "The Bible is revelation in **writing** – Scripture – and this fact is of supreme importance. Writing is fixed, objective, definable communication to an extent that no other means is".

3.20.5.3 Covenant relations

Once the New Covenant was accomplished, and the canon was complete, the two testaments are presented to the reader as an integrated unit. We can read any book from either testament, it does not matter now, since it presents itself as a unit. As Barrett (2020:35) says:

Sensus plenior is helpful if for no other reason than it moves the interpreter beyond the grammar and historical background of the human author to the divine author's intention not just in one text but across the canon as it progressively and typologically unfolds in God's own timing and according to his own plan. More to the point, it is because *sensus plenior* is grounded in the intention of the divine author that typology is eschatologically oriented, not merely being retrospective, but prospective as well.¹¹⁰

¹¹⁰ See Brevard Childs's "Introduction to the Old Testament as Scripture" and "The New Testament as Canon: An Introduction".

3.20.5.4 Covenant positional value

The New Testament is the starting point and from there we move to the Old Testament, seeing how the testaments are an integrated unit of nested covenants. The types and prophecies are fulfilled and explained in the New Testament, so it is best to start there and then refer to the Old Testament. Since, as Progressive Covenantalism argues, the New Testament is the record of the culmination and fulfilment of all previous covenants (recorded in the Old Testament) into the new covenant, which is inaugurated in Jesus Christ, we view the Old Testament covenants through new covenant lenses.¹¹¹

3.20.5.5 Covenant dimensional domain

The testaments are translated and published as an integrated unit: the Old Testament forms the first part of the book; the New Testament forms the second. Although they are a 66 book 'library' the 39 books of the Old Testament and the 27 books of the New Testament are presented to us as a single interdependent book of nested covenants, culminating in the New Covenant.

3.20.6 The written word of God: Canonisation

Kruger says the boundaries of the canon of the written word of God are defined by all three definitions: ontological, functional, and exclusive (2013:43) which he categorises as either intrinsic (ontological) or extrinsic (functional and exclusive), and advocates using all three to provide an exhaustive definition of canon.

3.20.6.1 Intrinsic canon: Ontological canon

This definition is based on what the canon is. It is the divine perspective and not merely the ecclesiological perspective. Kruger defines these as: the authoritative books that God gave his church (2013:40). This definition acknowledges a first century canon existing as soon as the books of the New Testament were written. This perspective is retrospective as it could be observed only after the fact (40).

¹¹¹ "One cannot fully understand Scripture and correctly draw theological conclusions from it without grasping how all of the biblical covenants unfold across time and find their telos, terminus, and fulfilment in Christ" (Gentry & Wellum, 2015:17).

3.20.6.2 Extrinsic canon (1): Functional canon

In this idea of the canon identified in an extrinsic sense, the concepts of Scripture and canon are closely related and often identical: “The term canon need not be restricted to a final, closed list but can ‘encompass the entire process by which the formation of the church’s sacred writings took place’” (Kruger, 2013:34). The term canon is applicable as soon as a letter is considered the written word of God by the early church (35). Here, canon is determined by the function of the epistle in the early Christian communities and not whether it was part of a final, closed list (36). On the functional definition of canon, the origins of the New Testament canon date to the middle of the second century.

3.20.6.3 Extrinsic canon (2): Exclusive canon

In this extrinsic idea, the concepts, and terms of ‘Scripture’ and ‘canon’ are separable. It identifies a “fixed, final and closed list of books” (Kruger, 2017:204). This definition considers the boundaries of canon as solidifying in the fourth century. Before this time there was no identifiable canon. Given the limitations and weaknesses of the exclusive definition we have observed, we should be hesitant to think it completely exhausts the meaning of the term (2013:34).

3.20.7 Canonical history and general control-problem solving

Kruger (2013:43) describes the flow of canonical history:

1. The canonical books were written with divine authority (first century).
2. The books were recognised and used as the written word of God by the early church (second century).
3. The church reaches a consensus around these books (fourth century).

Kruger’s three definitions are compatible with general control problem solving:

1. The ontological canon is about the origin and maintenance of the written word of God’s being. It is the written word of God.
2. The functional canon is about the maintenance of the written word of God’s behaviour. It behaves as the written word of God.

3. The exclusive canon is about the development of the written word of God. It becomes the written word of God.

This means that each of these processes within the written word of God were in a **transient** state before reaching **dynamic equilibrium** state.

3.20.7.1 Ontological transience

The New Testament writings came into being by God through the authoritative apostolic band as it was being written in space and time (Kruger, 2017:188-193).

3.20.7.2 Ontological dynamic equilibrium

The New Testament continued being the written word of God after the writing was completed.¹¹²

3.20.7.3 Functional transience

The New Testament writings began to be circulated (Kruger, 2017:193-200) and behaved as the written word of God in church.

3.20.7.4 Functional dynamic equilibrium

The New Testament writings continued to behave as the written word of God in the church.

3.20.7.5 Exclusive transience

The New Testament writings became the written word of God as church recognised them.

3.20.7.6 Exclusive dynamic equilibrium

The New Testament writings became the written word of God by consensus of church.

3.20.7.7 Canon as process

When it comes to canon it may be better if we adjust our thinking to the written word of God as a process. Kramer and de Smit (1977:38) state that a system's process is its dynamic property. Quoting Diesing, they observe that processes "differ from systems in that they are composed of states rather than of elements and relations". Just as the written word of God is

¹¹² As soon as the original manuscripts were completed, the New Testament was the written word of God and in alignment with the Old Testament canon. Once ontological transience was completed (through writing) the Word was manifest in words.

composed of interrelated and interdependent parts or elements, the canon as process is composed of states. Kramer and de Smit (1977:38) define the system's process "as the system of actions of a system." This is compatible with Kruger (2013:43) who defines the canon as being a process:

The fact that these three definitions (that is, ontological, functional and exclusive) are linked together in such a natural chronological order reminds us that the story of the canon is indeed a process; and therefore, it should not be artificially restricted to one moment in time.

The fact that the canon exhibits all three of these qualities implies that the written word of God was cybernated by the triune God. He solved three general control-problems by breathing out the written word of God. God brought the written word into being (by breathing it out through authoritative human agency: the 'apostles' and the 'prophets'). Church recognised these texts functioning or operating or behaving as the written word of God in their midst. Finally – by consensus – church recognised the written word of God becoming the exclusive, bound canon.

3.20.8 The written word of God and the GST systems thinking tradition

GST is present in the church's historical understanding of the written word of God since it is in concord with prior nested authoritative divinely directed systems: the Old Testament, the incarnate personal word of God and the authoritative apostolic band. As a cybernated system, the written word of God can be understood in the major GST categories: openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation.

3.20.8.1 Openness/cybernated

The written word of God is an open system, breathed out by God through people and being authoritative and living and active.

3.20.8.2 Boundary/enviored

The written word of God has a boundary. There is an ontological, functional, and exclusive canon. Everything inside that boundary/enviored is special revelation. Kruger (2017:8) states that the boundaries of the collection of core books that early Christians considered Scripture, or the written word of God, was not solidified until the fourth century. The majority was in place by the middle of the second century. The canon was first ontological, then functional, and then

exclusive. Cole (2020:91) states regarding orthodox Christology, which also has broader application: “There is room for opinion and speculation as to the how of the incarnation. But opinion and speculation need to observe the boundaries if those boundaries can be shown to be warranted by the word of revelation”.

3.20.8.3 Hierarchy/nestedness

Checkland (1991:83) notes that to maintain any system hierarchy/nestedness entails a set of processes in which there is a communication of information to regulate or control the open system. The written word of God is a regulated hierarchically, being a:

3.20.8.3.1 Covenant supersystem

Each of the two testaments composing the written word of God are likewise composed of their own subsystem collections of integrated books (39 in the old and 27 in the new) and,

3.20.8.3.2 Covenant subsystem

The written word of God is a kind of revelation: special revelation. The other subsystem is general revelation. These two integrated together compose all revealed, knowable truth¹¹³ or simply, revelation.

Table 7 Hierarchy/nestedness of written word of God system

Supersystem	Revelation		
System	General revelation	Special revelation	
Subsystems	Book of nature	Old Testament Covenants	New Testament
	Nature (through the discipline of natural science or “natural philosophy”)	1. Creation 2. Noahic 3. Abrahamic 4. Mosaic 5. Davidic	New Covenant

¹¹³ “God’s revelation comes to us in two forms – natural and special revelation. Natural (or general) revelation is what God has written in the book of nature, the world around us, in penmanship legible (theoretically) to all human persons. Special revelation is what God has written in the book of Scripture, the Bible” (Naugle, 2017:98). Although the latter is necessary for salvation it does not automatically imply that the former is unnecessary.

3.20.8.4 Emergence/design pattern/downward causation

“Emergent properties” is a core idea in systems thinking. It concerns the fact that complex wholes may have properties which are meaningless in terms of the parts which make up the whole (Checkland & Scholes, 1990:18-19). The written word of God (the whole is composed of two Testamental parts) has emergent functional properties found in 2 Timothy 3:16.

3.20.9 The written word of God and Skyttner’s 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties of the written word of God, we can focus on more detail. The written word of God is an open system spirated by the triune God. Using Skyttner’s irreducible properties of open systems, we can understand the written word of God as an open system by summarising them into 10 conceptual principles applicable to the written word of God¹¹⁴.

3.20.9.1 Interrelated and interdependent parts

The written word of God is composed of integrated covenantal ‘parts’: the old and new testaments. These covenantal parts are in union: they are integrated because they are in mutual relation and mutual dependence or ‘service’. The covenantal parts are not in disunity. Disunity occurs from one-way dependence or service or by being unrelated or independent. Kruger (2017:144) quotes Clement of Alexandria regarding interdependence of the testaments: “the ecclesiastical rule is the concord and harmony of the law and the prophets with the covenant delivered at the coming of the Lord”. He (175) notes regarding the books of the New Testament:

What is particularly noteworthy about these Christian writings is the manner in which they engaged with earlier written texts, primarily the Old Testament. Christian authors

¹¹⁴ It should be noted that this is comparable with Melanchthon’s *loci* or *topoi* methodology which asks the following question of any subjects under examination:

1. What does the word mean?
2. To what does that word pertain?
3. What are its parts?
4. What are its characteristics?
5. What are its causes?
6. What are its effects?
7. To what other things does it pertain?
8. To what is it related?
9. With what does it conflict? (Van Asselt & Rouwendal, 2011:88)

did not merely cite the Old Testament; they offered serious, extensive and sophisticated textual interaction with these writings.

Kruger (2013:94) explains that even prior to writing the New Testament writers were “committed to the books of the Hebrew Scriptures and saw them as paradigmatic for understanding the life and ministry of Jesus of Nazareth”. The Synoptic Gospels connect the story of Jesus with the story of Israel (134-135). John 21:24 with John 20:30-31 is using a precise phrase from Deuteronomy 28:58, 2 Chronicles 34:21 and Jeremiah 25:13 which indicate self-reference to his writings as the written word of God (137-138). Lastly, in 2 Peter 3:2 the offices of prophets in the Old Testament and apostles of the new covenant are linked conceptually as “two equal sources of authority” (150). Kruger concludes: “This suggests that 2 Peter understands divine revelation to be in two distinct phases or epochs – perhaps an allusion to the beginning of a bicovenantal canon” (150). This means that the authoritative apostolic band were actively integrating what the Old Testament prophesied and communicated in types with what they had personally witnessed the life, ministry, death, resurrection, and ascension of Jesus Christ. As they did so they were knitting the canon together.

3.20.9.2 Holism

A holistic written word of God is necessary and positive. Any form of reductionism is not exhaustive, comprehensive, or plenary¹¹⁵. McDonald (2006:32) puts it this way: “Scripture is God-breathed in all its parts.... The Spirit’s activity is not limited to a few texts or special passages of Scripture but belongs to the written Word as a whole”. Thompson (2022:24) notes how the written word of God has a “grand covenantal structure” which we can understand as promise and fulfilment. Since the written word of God has this structure, it can provide contextual exegesis of individual texts. The written word of God must be plenary. All Scripture is God-breathed. Similarly, Martin Luther believed this was important for exegesis¹¹⁶: “to understand any part of scripture required the whole scripture” (Thompson, 2022:128). The Bible is not only plenary but also verbal, “God-breathed Scripture consists of God-given words. The Scriptures are “sacred writings”” (McDonald, 2006:32).

¹¹⁵ “There are no degrees of inspiration in the Bible. The whole of it is the word of God to us because the whole of it is God-breathed” (Thompson, 2022:104).

¹¹⁶ Exegesis – “interpreting the intended meaning of the text, usually through understanding word meanings, grammar, and context” (Horton, 2006:688).

3.20.9.3 Teleological

The written word of God, like the Gospel¹¹⁷, has a goal to sanctify, liberate and glorify Christians through truth. The liberation through the Gospel, according to Banks's description of the effect of the Gospel on church, manifests as an integrated system: interdependence, dependence, and independence (Banks, 2020:22-23). Barrett (2020:88), quoting Dempster, articulates the goal or *telos* of the canon in this way:

Is that the law of God, heard so powerfully at Sinai, be written in each human being's heart: that God's law be transferred from the tablets of stone, scrolls and codices of papyrus and leather in the ancient world, or books printed on paper or distributed via digital media in the modern world, and inscribed on human hearts by the Holy Spirit (2 Cor. 3).

3.20.9.4 Transformation

This refers to active and beneficial conversion within the relevant environment. The relevant environment for the written word of God is the myriad alternate authorities in man-made theology and philosophy that compete with it. This includes the worldviews or hearts of all humanity.

In *The Universe Next Door* Sire catalogues the main ones. The written word of God competes with, confronts¹¹⁸, assesses and addresses these worldviews as the hearts holding them meet it. Byl (2004:7-11) describes the 'Mysterious Trio' we discover in creation: matter, mind, and mathematics. Nobody denies these three exist or at least seem to exist. But how they relate to each other, and their origin will determine which camp a person falls into, the main contenders in Western civilisation being Christian theism and naturalism (materialism). Byl (2004:7) summarises the former: "God provided the coherence between matter, human minds and mathematics". Holding to this worldview immediately leads to what Naugle terms 'worldview warfare' (2002:280-284) against other competing worldviews. The written word of God, which is the truth, converts the worldviews of hearers who respond with a humble heart to allegiance to King Jesus. The conversion of the hearts (worldviews) of hearers is salvation from sin and death.

¹¹⁷ See Matthew W. Bates, *The Gospel Precisely: surprisingly good news about Jesus Christ the King* (2021:34), and Bates, M.W. 2017:52.

¹¹⁸ See Ronald H. Nash, *World-Views in Conflict: Choosing Christianity in a world of ideas* (1992).

3.20.9.5 Inputs and outputs

The relevant environment surrounding the written word of God (that is, the worldviews of sinful human hearts) continually provides inputs (partially or totally flawed worldview propositions and narratives) which are then converted into propositions and narratives aligned with the truth (that is, the Christian theism worldview). Skyttner (2005:78) labels the processes of input, transformation, and output together as throughput.

The written word of God has the following throughput: 1. Input: partially or wholly false propositions and narratives from the worldviews of sinful human hearts. 2. Transformation: conversion of partially or wholly false propositions and narratives to true propositions and narratives found in the written word of God. 3. Output: propositional and narrative Christian theism worldview in the heart.

3.20.9.6 Negentropic

The written word of God seeks to bring propositional and narrative order (truth) to human hearts (worldviews) by reducing propositional and narrative disorder (deception). The disorder exists in the surrounding sinful world which is replete with partially or totally false propositions and narratives about reality. However, “God is not characterized by disorder but by peace” (1 Cor. 14:33, NET).

3.20.9.7 Regulated (cybernated or controlled)

The written word of God was and is cybernated by divine spiration (all Scripture is “God-breathed”) through the Old Testament prophets and the authoritative apostolic band (Eph. 2:20). God regulated the written word of God by detecting and correcting necessary deviations through divine feedback which results in written word of God stability in the form of dynamic equilibrium (canon). Canon history shows us this process of ontological, functional, and exclusive canon.

3.20.9.8 Hierarchy/nestedness

As stated previously, the written word of God is an integrated system of truth (revelation). And so, the written word of God (special revelation¹¹⁹, from inspired words from God) together with

¹¹⁹ The canon provides the limit of special revelation sufficient to save people. It is divine-human communication of revealed truths which cannot be communicated through the general revelation system of truth. The best that the general revelation system can do is provide inference to a transcendent being, but cannot provide special information concerning the mysteries of the Great Tradition: Christology, Trinity, and soteriology.

general revelation (from nature) compose the revelation supersystem (that is, all possible knowable truth). The written word of God itself is composed of two meta-categories or two subsystems which appeared consecutively as systems in their own right: the Old Testament and the New Testament.

3.20.9.9 Differentiation

The written word of God has one function (verbally communicating revealed truth to sanctify, liberate and glorify Christians). Nevertheless, it proclaims and teaches this truth in a variety of discrete books, genres, and authors. Each testament reflects its own covenants, and we cannot understand one covenant without reference to the other, they come as a pair in bound form. The written word of God has functional division and co-ordination of labour among the testaments. Each testament is distinct and focused on God's various covenants (creation, Noahic, Abrahamic, Mosaic, Davidic, and New). God's work with humanity is progressive and therefore we perceive functional difference in his special revelation over time. The Old Testament functions to predict (through covenants, prophecies, and types) and the New Testament functions to fulfil (through the New Covenant, fulfilled prophecies and anti-types). These two meta-categories together are fundamental for formation of a holistic canon of Scripture. These two testaments are assembled by God with thoughtful consideration over centuries. Regarding the origin of the written word of God, Bray (2016:1123) notes: "Hodge and Warfield gave full credit to the human agency of the writers chosen for the task and affirmed that the texts we have reflect their specific gifts and backgrounds".

3.20.9.10 Equifinality and multifinality¹²⁰

The written word of God has equally valid alternative ways of attaining the same objectives (of liberty, holiness, and glory) from different initial conditions of a person's worldview propositions and narratives by truth convergence. Conversely, the written word of God has equally valid alternative ways of attaining the same objectives (of liberty, holiness, and glory) from a given initial state of worldview propositions and narratives will obtain different and mutually exclusive objectives by truth divergence. In other words, to accomplish sanctification, liberation and glorification, the written word of God converges the propositional and narrative content of a person's heart or worldview (from a state of truth diversity) and/or diverges the propositional and narrative content of a person's heart or worldview (from a state of truth uniformity).

¹²⁰ "Open systems have equally valid alternative ways of attaining the same objectives from different initial conditions (convergence) or, from a given initial state, obtain different, and mutually exclusive, objectives (divergence)" (Skyttner, 2005:54).

3.20.10 The written word of God as an integrated system

From this overview of the written word of God as an open system, we conclude with the threefold GST theme true of all cybernated open systems:

3.20.10.1 Independence

Testamental and covenantal independence is undesirable. Therefore, no covenants are independent of one another. Absolute ontological independence is a property of God alone.¹²¹

3.20.10.2 Unidirectional dependence

One testament or covenant depending absolutely on another testament or covenant is undesirable. The Old Testament (including all covenants) and the New Testament or New Covenant depend on each other and serve one another. Although dependence of testaments and covenants is unequal (for example, the New Testament takes priority when exegeting), it is never one-sided, it is always mutual. Absolute ontological dependence is to be directed to God alone¹²².

3.20.10.3 Interdependence

The two meta-categories of the Old and New Testaments and all covenants mutually depending on and serving one another is desirable. The message of each testament or covenant is arranged to serve the other as an integrated unit of truth, spirated from the triune God. In divine and human relations this is known and commanded as 'love' and so the written Word of God functions in the same way¹²³. This system integration is the beautifully orchestrated result of the written word of God being cybernated by the triune God through prophets and then authoritative apostles. Let us ask now: how is Dogmatic Theology to be understood using GST?

¹²¹ Summarising Bavinck, Bray describes this divine attribute as "Independence, self-sufficiency, aseity" (2021:136).

¹²² Matthew Bates defines such absolute dependence, *pistis*, or faith as "allegiance", including "intellectual assent to the gospel, professed loyalty to the Christ, and embodied fealty" (Bates 2017:100).

¹²³ "Love is a settled purpose of will involving the whole person in seeking the well-being of others" Horton 2006:110.

3.21 Dogmatic Theology and GST

Applying the **system principle** to Dogmatic Theology we can state that a whole Dogmatic Theology is greater¹²⁴ than the sum of its 'parts', that is, the individual dogmatic or doctrinal axioms containing Christian theism worldview propositions¹²⁵. Dogmatic Theology is not only cybernetic, but it is cybernated. It does not only exhibit information, feedback, and control, it is also subject to a higher order cybernetic influence. On Dogmatic Theology being controlled by the written word of God, Cole (2020:24) states that it, "is not only a source and a witness but also the norm by which theological proposals are to be tested". To properly understand how dogmatic theology serves the authoritative divine direction within the church, we must first understand how Dogmatic Theology has the defining properties of a system.

3.21.1 Dogmatic Theology as a system

Dogmatic Theology, as a servant of the written word of God, has propositional theological constancy over time and propositional theological goal-directedness. Dogmatic Theology exhibits order, pattern, and purpose. Its purpose is the reason it exists and that is how to measure its functional success: Does it result in orthodoxy, orthokardia, and orthopraxy? Unlike a goal or objective, Dogmatic Theology's purpose is relentlessly pursued but is ultimately unattainable. Church, full of saved sinners, can expect to be whole or justified but never 'perfect'.

3.21.1.1 Order, pattern¹²⁶, and purpose

There is truth, goodness, and beauty in dogmatic theology. It is orderly since it is assembled and presented in a systematic way and that is why it is also called systematic theology. Cole

¹²⁴ My future goal is to at least show that the same frameworks (cybernetics and GST) could be useful for Natural, Biblical (supplemented by Historical), and Dogmatic or Systematic Theology. I believe that the more than the sum of its parts provides both the whole-and-parts systems thinking that we are chained to but allows for a transcendent inference with more detail provided by the divine missions. I suppose I would need to wrestle with Barth's assertion of unfinished. My uneducated guess is that it will be unfinished due to human perception before resurrection. Nevertheless, through my study and thought I suspect that the Tree of Life which is to heal all nations and provides monthly fruit, is accessible by the nations in the Church now, and is perhaps the Revealed Knowledge of God ("Theology") we disseminate.

¹²⁵ As I have been at pains to articulate, all created things have the four properties of living systems, one of these is "boundary". If the universe has a boundary that is expanding, perhaps growing new at its edge, is it finished? Maybe only physicists can answer that. It is worth investigating because to me all science, including Theology, is a quest for truth.

¹²⁶ Probably the clearest example of patterns is in narrative form: biblical theology draws out themes embedded in the text from Genesis to Revelation.

(2020:13) defines theology as “talk about God” and he says, “When that talk is organized, we have a body of teaching, or doctrine.” Dogmatic Theology presents patterns of axiomatic truths in propositional form. Both the dogma of the triune God and the dogma of Christ are articulations regarding *ousia* and *hypóstases*. Both also, along with union with Christ soteriology, deal with mutual indwelling. The pattern of all dogmas will be:

1. Is the subject uncreated or created being?
2. How do we apply the cybernetics framework to describe the subject?
3. How do we apply the GST framework to describe the subject?

Serving the written word of God’s purpose of Christoformity: liberation, sanctification, and glorification, Dogmatic Theology’s purpose is the reason it exists and indicates how to measure its functional success: “All Scripture is God-breathed and is useful for teaching, rebuking, correcting and training in righteousness, so that the servant of God may be thoroughly equipped for every good work” (2 Tim. 3:16-17, NET). A Dogmatic Theology system is an arrangement of dogmatic or doctrinal ‘parts’ or axioms that are propositional that together exhibit behaviour or meaning that individual dogmas or doctrines and propositions do not. According to the GST tradition, a dogma or doctrine is a propositional ‘sub-system’ in the whole Dogmatic Theology system or Christian theism worldview in propositional form. Dogmas and doctrines, as interrelated and interdependent subsystems, compose the whole system formally named ‘Dogmatic Theology’ and informally the ‘Christian theism worldview’. Dogmatic Theology has emergent theological properties or synergetic effects: sanctifying, liberating, and glorifying truth¹²⁷.

Table 8 System design and Dogmatic Theology

System design	Dogmatic Theology
1. Order	1. Dogma of the triune God 2. Doctrine of creation
2. Pattern	Pattern of knowledge of being
3. Purpose	Liberation, sanctification, and glorification

¹²⁷ John 8:32

Truth is part of what has been called the 'transcendentals trinity' which always appear together and are in a sense one and the same. Dogmatic Theology has the transcendentals trinity: truth, goodness, and beauty. In addition to showing organisation, to qualify as a system Dogmatic Theology must have these attributes:

3.21.1.2 Continuity of identity

This is the preservation of structure amid changes. Dogmatic Theology, serving the authoritative divine direction of the written word of God, has theological constancy over time. For example, historical theology shows the biblical origin and ecclesiological development and maintenance of dogmas and doctrines in propositional form since the creeds¹²⁸ as well as their manifold defence by leading thinkers in church. From this we perceive that post-creedal Dogmatic Theology has continued and been preserved in propositional form. Historical theology teaches us that the core creedal Christian dogmas and doctrines have been protected until today.

3.21.1.3 Goal-directedness or teleology¹²⁹

Theologically, this is Christoformity: the sanctifying¹³⁰, liberating, and glorifying function because of cybernation from the written word of God. Dogmas and doctrines have the goal of establishing truth, goodness, and beauty in the church, in propositions. To have this goal-directedness or teleology, Dogmatic Theology must be cybernated by the written word of God, the Holy Spirit, and church.

Table 9 System design and Dogmatic Theology

System design	Dogmatic Theology
1. Continuity of identity 2. Preservation of "structure" amid changes 3. Constancy over time	One truth: Creator-creature distinction and relation.
1. Goal-directedness 2. Teleology	One goal: Glory.

¹²⁸ Creed – "A formal statement of beliefs or doctrines" (Horton, 2006:685).

¹²⁹ Teleology – "A way of explaining nature in terms of divine purpose and design; the teleological argument for God's existence posits that nature's evident purpose and design require a Designer" (698).

¹³⁰ Sanctification is, "The act of consecrating or setting apart for a holy purpose; the process of conforming to the character of Christ through the Holy Spirit" (697).

3.21.2 Dogmatic Theology behaviour

Dogmatic Theology is identified by its behaviour. As a system, Dogmatic Theology satisfies three behavioural conditions:

1. Behaviour of each dogmatic and doctrinal proposition effects the behaviour of the whole dogmatic theology. For example, holding to any of the six Christological heresies listed in *Hexagon of Heresy* (2022:11) results in a system that is completely disintegrated (heretical).
2. Behaviour of dogmatic and doctrinal propositions are interdependent. For example, the dogma of the triune God (theology proper) and the dogma of the hypostatic union¹³¹ (Christology¹³²) are dependent on/serve one another. Both require an understanding of perichoresis (or coinherence, Bray, 2016:647) and are built on the creedal summaries of *ousia* and *hypóstasis*. For example, holding to an unorthodox doctrine of God will negatively affect the doctrine of Christ and the doctrine of salvation. Lane (2006:31) states it well: “The deity of Jesus Christ is the foundation of all true Christian faith. Without it, there is no true revelation of God in Jesus. Without it, the doctrine of salvation is undermined.”
3. In whatever way the subsystems (the individual dogmatic and doctrinal propositions) are formed, all influence the behaviour of the whole Dogmatic Theology: they are not independent (which would mean no effect). For example, a minor doctrine like angelology¹³³ or the major schools of eschatology¹³⁴ must be in harmony with a major great mystery dogma like the triune God or Christology. The behaviour of Dogmatic Theology is only observable by its output. Dogmatic Theology, although it is a conceptual and not a physical system, exhibits ‘behaviour’ since it has output. Dogmatic Theology is embedded in a living being – church – and so it has real-world output. Its behaviour is this set of attributes present in the real-world in the church: propositional answers to questions of the ‘head’: truth; the ‘heart’: spirituality; and the ‘hands’: existential/practical.

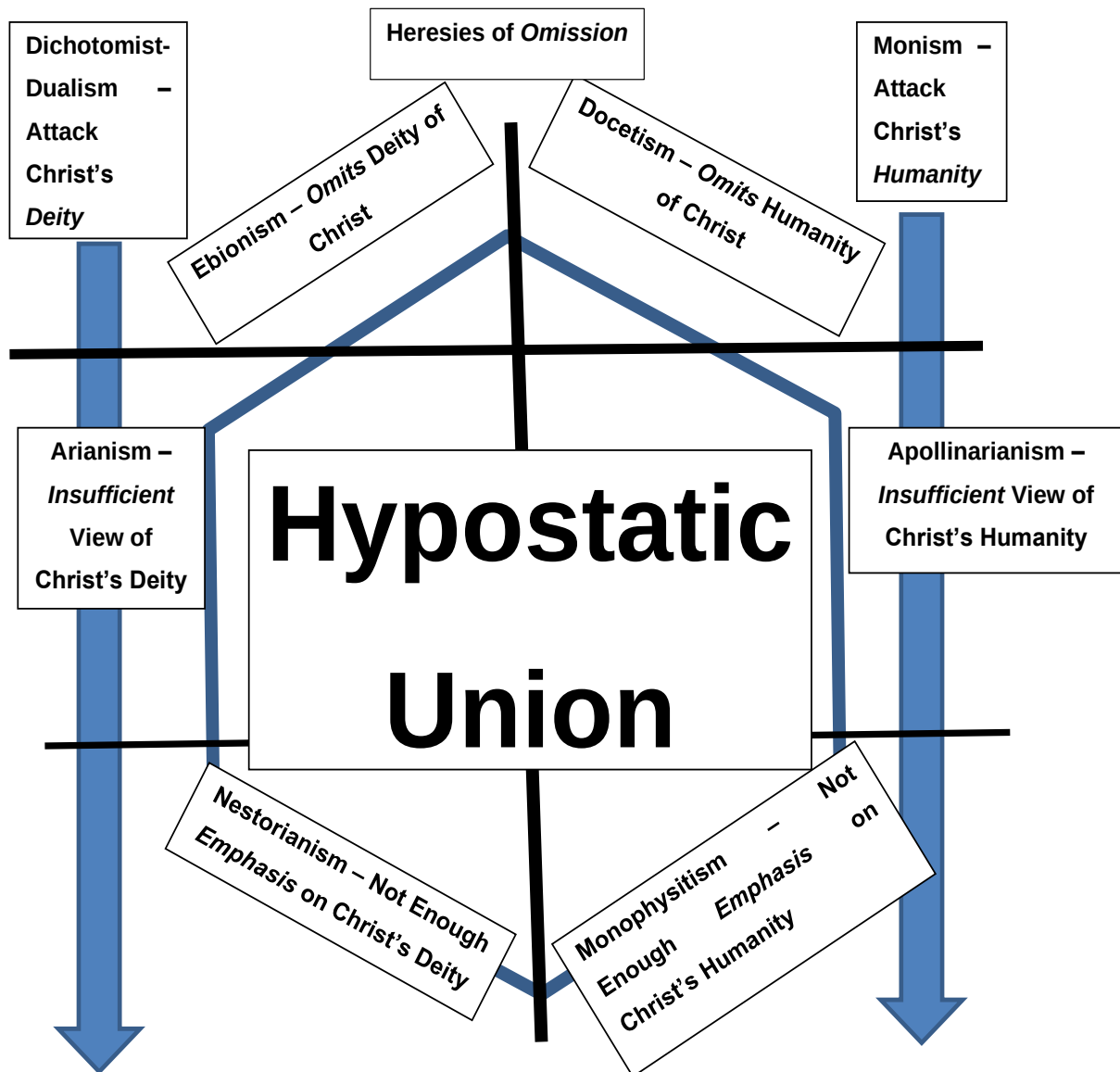
¹³¹ Hypostatic union – The union of divine and human natures in one person, Jesus Christ” (Horton, 2006:689).

¹³² Christology – “The study or doctrine of Jesus Christ, his nature(s), his person, his work” (684, pluralisation mine).

¹³³ Angelology – “The study or doctrine of angels” (678).

¹³⁴ Eschatology – “The study or doctrine of “last things” (687).

Figure 1 Gifford's Hexagon of Heresy



3.21.3 Dogmatic Theology: Dogmas and doctrines

What is a dogma? We should review our definition: “A dogma is a faith-proposition that claims to be true and demands universal recognition” (Bavinck, 2003:46). In other words, for Christians, an individual dogma is an axiom in propositional form derived from the written word of God, and this axiom asserts a truth about reality which is unknowable apart from divine communication and therefore inexorably commands allegiance to itself. A dogmatic proposition is irreducible. When we teach that “God is one being (*ousia*) and three persons (*hypóstases*)” this is the simplest possible articulation of the dogma of the triune God¹³⁵. Naturally this proposition requires further explanation of the terms and concepts behind being (*ousia*) and person (*hypóstasis*). As Gifford (2022:3) states, “I will contend, along with John of Damascus, that all of the great Christological heresies confuse person and nature.” Asking ‘who?’ and asking ‘what?’ are two different questions with two different answers. Much heresy came by simply confusing these questions and answers as early Christians wrestled with Hellenistic concepts of being and personhood. Their labour, arising from a desire to protect what the written word of God taught, intended to articulate the dogma of the triune God and the dogma of Christ in propositional form clearly and truthfully against heretical propositions in the surrounding environment. Whatever the outcome of their wrestling, it would result in the axiomatic propositions of these two central dogmas. Cole (2020:76) refers to “dogmatic rank” which means that dogmas and doctrines must be ranked. Although all biblical propositions are important for fellowship and remaining faithful, not all of them are equally important¹³⁶. He (77) advocates asking, “What is lost if this dogma or doctrine is removed from our beliefs?” The example he gives is of Jesus Christ as fully God. If we jettison this dogma, we lose all three perichoretic dogmas/doctrines: Trinity, Christology, and salvation.

Using propositional truth statements, Christians assemble a Christian theism worldview in propositional form that passes all three truth tests: correspondence, coherence, and pragmatic (Anderson, 2017:78):

¹³⁵ Christian Dogmatic Theology is **Trinitarian** – “Relating to the doctrine of the Trinity; one who holds to this doctrine” (Horton, 2006:698).

¹³⁶ So therefore we see hierarchy present within dogmatic theology. I would agree with Carter that the mysteries of the Great Tradition are central to Christian Theology and non-negotiable (Christology, Trinity, and salvation). Since systematic or dogmatic theology are results of the prior process of Biblical Theology, they will exhibit openness, boundary, hierarchy, and emergence/design. Presuppositions are the faith commitments all people have due to general revelation and natural theology. The process of exegesis-biblical theology (supplemented by historical theology)-systematic or dogmatic theology exists to liberate, sanctify, and glorify people. This happens through correcting, healing, and re-setting presuppositions within worldviews.

The three primary tests for worldview truth are tests of consistency: **internal, external, and existential**. The test for internal consistency, or logical coherence, seeks to ensure that the worldview makes sense within itself, that it is free from logical contradictions. The test for external consistency, or evidential correspondence, seeks to ensure that the worldview makes sense of the world, that it is factually adequate. The test for existential consistency, or **pragmatic** satisfaction, seeks to ensure that the worldview makes sense of life, that it is subjectively livable (91, bold mine).

The Christian theism worldview in propositional form passes these tests and is compatible with dogmatic theology. It could be understood that dogmatic theology is the formal statement of the Christian theism worldview in propositional form. Worldview development (Christian and other) happens organically, sporadically and through a variety of different ways, but it is a natural human spiritual process of propositional assembly in the heart.

3.21.4 Dogmatic Theology system structure: Dogmas

Dogmatic Theology is cybernated by the written word of God and so the propositions of the dogmas of triune God and creation (the meta-categories) are interdependent. Dogmatic Theology resists dependence of one dogma or doctrine on the other and it resists independence of either dogma or doctrine. When it comes to the structure of Dogmatic Theology there are three necessary properties:

1. The set of relations that exist between the propositions of both dogmas/doctrines.
2. The positional value of the arrangement of the propositions of the dogmas/doctrines in relation to the whole Dogmatic Theology.
3. The dimensional domain of the propositions of the dogmas/doctrines of the Dogmatic Theology.

3.21.4.1 Dogmatic and doctrinal relations

Once the creeds were complete the propositions of the dogmas and doctrines are presented to the reader as an integrated unit.

3.21.4.2 Dogmatic and doctrinal positional value

The dogma of the triune God proposition is the starting point and from there we move to the doctrine of creation proposition, understanding the dogmas/doctrines are an integrated unit.

3.21.4.3 Dogmatic and doctrinal dimensional domain

The dogmas and doctrines are codified in the creeds and published as an integrated unit of propositions.¹³⁷ These three structural properties of all systems help us distinguish between an aggregate and a system. With an aggregate there would be, for example, no 'positional value' in the relations between the dogmas/doctrinal propositions of dogmatic theology and thus no relation to the whole. Since dogmatic theology is the servant of special revelation, which is divinely communicated data, it must exist within a concrete system. This concrete system primarily the creeds in published form, and then all published works derived from Christian reflection.

3.21.5 Dogmatic Theology and the GST systems thinking tradition

Kruger tells us that despite the canon being closed, it is an open system. Although not named as such, the systems thinking tradition of GST has always been present in Dogmatic Theology since it has always been concerned with the output of the exclusive canon. Dogmatic Theology, since it is a product of the truth of the canon, coming from and after the creeds to assist the mission, can be understood in the major GST categories: openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation. In engineering a whole conceptual system of Dogmatic Theology, we bear in mind these four attributes that are likewise true of the written word of God which is the divine authority of the church.

3.21.5.1 Openness/cybernated

Dogmatic Theology is an open system engineered from the creeds. The creeds, in turn, were engineered by the post-apostolic Christian leadership from the explicit canon.

3.21.5.2 Boundary/enviored

The Dogmatic Theology boundary/enviored is defined by the written word of God. The whole written word of God has a boundary. There is a defined canon. Kruger (2013) says the boundaries of the canon of the written word of God is defined by all three canon definitions:

¹³⁷ Referring to order and structure of the ancient *Regula Fidei* or Rule of Faith, Kruger (2017:144) notes that it is presented as both propositional and narrative, a history of redemption. The Rule of Faith provided a continuous tradition possibly predating the Pauline corpus (162) to refute Ebionites, Marcionites, Gnostics and Montanists (111-134).

ontological, functional, and exclusive. As the written word of God has a boundary, so the creeds are environed, and so Dogmatic Theology has a boundary.

The Dogmatic Theology boundary, like all boundaries, is difficult to locate. It is mostly determined by several criteria which the dogmas and doctrines must fulfil to be considered within the Dogmatic Theology system. Why identify the Dogmatic Theology boundary/enviored? Without identifying it, it will be difficult or impossible to identify the relevant environment outside of the system. The relevant environment is everything outside the Dogmatic Theology boundary/enviored (the worldview milieu). The boundary/enviored surrounds the Dogmatic Theology system in such a way that the intensity of interactions across this line is less than that occurring within the Dogmatic Theology system. In other words, the focus in Dogmatic Theology is primarily internal (the dogmas and doctrines within the Christian theism worldview, within the world of Christian thought) and secondarily in relation to the broader environment (the truth of the Christian worldview in relation to other worldviews). This is the distinction between polemics and apologetics.

Crossing the theological boundary/enviored requires transformation or conversion. When it comes to information coming from the worldview milieu, the theological boundary/enviored of Dogmatic Theology has a coding and decoding property. This means that the theological output (that is, the Christian theism worldview in propositions) is not identical to the theological input (worldview milieu propositions and narratives). The creeds provided this minimal boundary/enviored as they distilled the written word of God's teachings into an efficient propositional form. Although the written word of God contains the same data, the creeds restructured and rearticulated them by being processed by the leaders of the early church into propositions. The major example of this would be the clarifications on the words *ousia* (nature) and *hypostasis* (person) found in the dogma of God as triune and the person and work of Christ. It is common knowledge that these terms (along with *Logos*) were used outside of Christianity (Bray, 1997:83).

As the church wrestled with the written word of God as highest authority for faith and practice, they had to make a distinction between the definitions of these terms which previously had been considered synonymous. Worldview interface is necessary for when conceptual systems do not interact boundary/enviored to boundary/enviored. Here we see the value of the worldview questions in propositional form which provides common ground for debate between dogmatic theology propositions and opposing worldview systems in propositional form.

3.21.5.3 Hierarchy/nestedness

The Dogmatic Theology system is both a supersystem and a subsystem. Each of the two meta-categories of dogmas/doctrines in propositional form composing Dogmatic Theology are composed of their own subsystem collections of integrated dogmas and doctrines in propositional form. It is also a kind of theology: sacred theology (I see Dogmatic Theology as the **propositional** sacred theology, and biblical theology as the **narrative** sacred theology). The other subsystem is natural theology. These two integrated together compose all knowable truth¹³⁸ or whole theology¹³⁹ or perhaps, even, 'science'.

Table 10 Hierarchy/nestedness of Dogmatic Theology system

Supersystem	Knowledge (all knowable truth)		
System	Natural Theology	Dogmatic Theology	
Subsystems	Book of nature	Dogma of the triune God	Doctrine of <i>creatio ex nihilo</i>

3.21.5.4 Emergence/design pattern/downward causation

Dogmatic Theology propositions holistically manifest emergent properties of Christoformity: liberty, holiness, and glory. They are crafted by the intelligent intentions of God along with, and through submitted human beings, that is, Spirit-filled Christians. Dogmatic Theology exhibits theological emergence from simple dogmatic and doctrinal axiomatic propositions.

3.21.6 Dogmatic Theology and Skyttner's 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties of Dogmatic Theology, we can focus on more detail. Dogmatic Theology is an open system cybernated by the written word of God. Using Skyttner's irreducible properties of systems, we can summarise them into 10 conceptual principles applicable to Dogmatic Theology.

¹³⁸ "God's revelation comes to us in two forms – natural and special revelation. Natural (or general) revelation is what God has written in the book of nature, the world around us, in penmanship legible (theoretically) to all human persons. Special revelation is what God has written in the book of Scripture, the Bible" (Naugle 2017:98). Although only the latter is necessary for salvation it does not mean the former is unnecessary.

¹³⁹ Biblical theology, like dogmatic theology, is likewise derived from the written word of God. While the latter is propositional the former is narrative.

3.21.6.1 Interrelated and interdependent parts

Dogmatic Theology is composed of dogmatic or doctrinal 'parts' (that is, discrete, axiomatic Dogmas and doctrines in propositional form). These dogmatic parts are in union: they are integrated because they are in mutual relation and mutual dependence or 'service'. The dogmatic or doctrinal propositions are not in disunity. Disunity occurs from one-way dependence or service or by being unrelated or independent.

3.21.6.2 Holism

This means "the big picture" comes first. A holistic Dogmatic Theology is necessary and positive. Any form of reductionism which focuses primarily or merely on propositions is not exhaustive, comprehensive, and holistic. Dogmatic Theology must be holistic as Scripture is plenary.

3.21.6.3 Teleological

Dogmatic Theology, like the written word of God, has the goal of Christoformity: to sanctify, liberate, and glorify Christians through divinely communicated truth. The liberation of church, through the written word of God, will manifest systematically: interdependence, dependence, and independence.

3.21.6.4 Transformation

Active and beneficial conversion within the relevant environment. The relevant environment for Dogmatic Theology is the worldview milieu, propositions in human hearts, surrounding Christian theism. Dogmatic Theology, as distilled truth, converts the partially or totally false propositions in hearts to the Christian theism worldview in propositional form. The conversion is to orthodoxy, orthokardia, and orthopraxy. This includes the worldviews or hearts of all humanity. Dogmatic Theology, which is the truth, converts the worldviews of hearers who respond with a humble heart to allegiance to King Jesus. The conversion of the hearts (worldviews) of hearers is salvation from sin and death.

3.21.6.5 Inputs and outputs

The relevant environment surrounding Dogmatic Theology (that is, the worldviews of sinful human hearts in propositional form) continually provides inputs (partially or totally flawed propositions) which are then converted into propositions aligned with the truth (that is, the Christian theism worldview in propositional form). Skyttner (2005:78) labels the processes of

input, transformation, and output together as throughput. Dogmatic Theology has the following throughput: 1. Input. Partially or wholly false propositions from the worldviews of sinful human hearts; 2. Transformation. Conversion of partially or wholly false propositions to true propositions found in Dogmatic Theology; and 3. Output. Christian theism worldview in the heart in propositional form.

3.21.6.6 Negentropic

Dogmatic Theology, being information, seeks to bring propositional order (truth) to human hearts (worldviews) by reducing propositional disorder (deception). The disorder exists in the surrounding sinful world which is replete with partially or totally false propositions about reality.

3.21.6.7 Regulated (cybernated or controlled)

Dogmatic Theology is cybernated by the written word of God (which always includes the Spirit) together with church (which is itself a pneumatically-cybernated community) who regulate it by detecting and correcting necessary deviations through feedback which results in dogmatic and doctrinal stability in the form of propositions in dynamic equilibrium. Historical theology shows us this generally upward trend with significant ups and downs.

3.21.6.8 Hierarchy/nestedness

As stated previously, Dogmatic Theology is an integrated system of revealed knowledge. And so, Dogmatic Theology (also called sacred theology or systematic theology¹⁴⁰ and biblical theology) together with natural theology (from general revelation) compose the theology supersystem (that is, all possible knowledge of God). Dogmatic Theology itself is composed of two meta-categories or two propositional subsystems which appear consecutively as systems in their own right: The dogma of the triune God and the doctrine of *creatio ex nihilo*¹⁴¹.

3.21.6.9 Differentiation

Dogmatic Theology has one function in service of the written word of God function (concisely communicating knowledge in propositional form to sanctify, liberate, and glorify Christians). Nevertheless, it proclaims and teaches this knowledge in a variety of discrete dogmas and doctrines. Each dogma or doctrine reflects its own subject in propositional form, and we cannot understand one dogma or doctrine without reference to the other, they come as a pair.

¹⁴⁰ Systematic theology – “A method, or system, for studying God and his relationship to his creation” (Horton, 2006:697).

¹⁴¹ These will be discussed in subsequent chapters.

Dogmatic Theology has functional division and co-ordination of labour among the dogmas and doctrines.¹⁴² Each dogma and doctrine in Dogmatic Theology is distinct and focused on knowledge about revealed reality in some discrete area. For example, the dogma of the triune God will articulate propositionally the necessary¹⁴³, uncreated creator is simple and transcendent¹⁴⁴ being (*ousia*) and three persons (*hypóstases*). On the other hand, the doctrine of *creatio ex nihilo* will articulate propositionally creation from nothing and contingent being. These two meta-categories together are fundamental for formation of a holistic Christian theism worldview in propositional form. These two doctrines are assembled with thoughtful consideration over centuries.

3.21.6.10 Equifinality and multifinality

Dogmatic Theology has equally valid alternative ways of attaining the same objectives (liberty, holiness, and glory) from different initial conditions of a person's worldview propositions by knowledge convergence. Conversely, Dogmatic Theology has equally valid alternative ways of attaining the same objectives from a given initial state of worldview propositions will obtain different and mutually exclusive objectives by knowledge divergence. In other words, to accomplish sanctification, liberation and glorification, Dogmatic Theology converges the propositional content of a person's heart or worldview (from a state of knowledge diversity) and diverges the propositional content of a person's heart or worldview (from a state of knowledge uniformity).

3.21.7 Dogmatic Theology as an integrated system

From this overview of Dogmatic Theology as an open system, we conclude with the threefold GST theme true of all cybernated open systems:

3.21.7.1 Independence

¹⁴² It should be noted that the total number of distinct dogmas and doctrines may vary. This should not be surprising since we cannot even agree on the exact number of organ systems, whether it is 11 or 12 (Laufmann & Glicksman, 2021:55). Nevertheless, there can never be less than two subjects: the meta-categories of uncreated creator and creation.

¹⁴³ Byl (2004:47), "Yet even an eternal universe must have a reason for its existence.... The reason that a necessary being exists is that it is impossible for it not to exist. The non-existence of a necessary being is inconceivable."

¹⁴⁴ Transcendence – "God's distinctness from and superiority over creation" (Horton, 2006:698).

Dogmatic and doctrinal independence of propositions is undesirable. Therefore, dogmas and doctrines are not independent of one another. Absolute ontological independence is a property of God alone.

3.21.7.2 Unidirectional dependence

One dogma or doctrine proposition depending absolutely on another dogma or doctrine is undesirable. The dogma of the triune God, the dogma of Christology and soteriology depend on an understanding of perichoresis (mutual indwelling, coinherence or interpenetration) to serve one another. Although dependence of dogmas and doctrines is unequal (for example, the three perichoretic dogmas and doctrines mentioned here are foundational and central to Dogmatic Theology or 'core' to the Christian theism worldview), it is never one-sided, it is always mutual. Absolute ontological dependence is to be directed to God alone.

3.21.7.3 Interdependence

The two meta-categories of the dogma of the triune God and the doctrine of creation mutually depending on and serving one another is desirable. All dogmas and doctrines are so arranged as to serve the others as an integrated unit of knowledge, distilled from the written word of God. This system integration is the beautifully orchestrated result of dogmatic theology being cybernated by the written word of God through the post-apostolic church.

3.22 Conclusion

In this chapter we have used the two foundational systems thinking traditions to understand the written word of God and its servant, Dogmatic Theology, as both cybernetic and cybernated systems. To do this, we outlined cybernetics systems thinking and authoritative divine direction, including the chain of authority starting with God's inherent authority and terminating in the written word of God (the final authoritative divine direction within creation). We explained both how the written word of God and Dogmatic Theology exercise cybernetic direction. Each one measures the performance and solves the general control problems of the open system it serves. With each of these we investigated cybernetic direction: information, feedback, and control. We also outlined the measures of performance (effectiveness, efficiency, and efficacy) that the control will check within the open system it serves, as well as the general control problems (being, behaving, and becoming) of all cybernated open systems that the control solves.

We explained how the written word of God and Dogmatic Theology are cybernated (directed and regulated), possessing all the major properties of GST systems (openness/cybernated, boundary/environed, hierarchy/nestedness, and emergence/design pattern/downward causation), including Skyttner's 10 irreducible properties of all open systems. Both the written word of God and Dogmatic Theology are integrated systems which combat independence and unidirectional dependence of their 'parts' and retain interdependence of their 'parts'. The purpose of the written word of God, as cybernetic and cybernated open system is ultimately to create and maintain a church that is integrated too: interdependent Christians who are increasingly Christlike in their worldview: orthodox, orthokardia, and orthopraxy. This is so that Christians in the church can be sanctified, liberated, and glorified. This is for the purpose of the personal ascended word of God to be glorified. And this is to glorify the triune God.

From here we will move to construct the dogma of the triune God using GST and cybernetics systems thinking. Together these two will form the primary "ontology"¹⁴⁵ which attempts to use systems thinking traditions to construct a holistic description of the divine being and the persons.

¹⁴⁵ Ontology – "The study of science of being/existence" (Horton, 2006:694).

CHAPTER 4 DOGMA OF THE TRIUNE GOD

In the previous chapter I gave an overview of GST and cybernetics systems thinking as it applies to Dogmatic Theology. The focus now is on the first of the two meta-categories of Dogmatic Theology: the dogma of the triune God. All Dogmatic Theology arises from this topic as Christians are, by definition, theocentric (Sanders, 2017:262). Karl Barth asserted that all dogmatics fundamentally and ultimately proclaims that God exists (Jones, 2017:8). Jenson (Letham, 2019:328) credits Barth with centralising twentieth century Christian theology on the doctrine of the Trinity. By applying the system principle to the dogma of the triune God we can state that the whole dogma of the triune God is greater than the sum of its 'parts', that is, the terms contained in the dogma. Although the dogma is built completely on the terms *ousia*¹⁴⁶ and *hypóstasis*¹⁴⁷ it is never 'merely' these terms. These terms in the creeds, being interrelated and interdependent, provide the whole knowable truth regarding the triune God. The creeds help Christians to become more Christlike as they serve Christoformity.

Christoformity includes two movements: mortification¹⁴⁸ (putting to death) and vivification¹⁴⁹ (bringing to life) (Sanders, 2017:276). The dogma of the triune God is an integrated whole intended to achieve the divine goal of Christoformity: liberation, sanctification, and glorification, in service to the triune God. The main concepts within both GST and cybernetics systems thinking traditions are applicable to the dogma of the triune God. The dogma of the triune God is useful for conceptualising God both in GST and cybernetics categories. However, using these traditions directly on the triune God can be complex. GST systems thinking is applicable to the triune God but **only** in a negative sense. In some ways cybernetics systems thinking is applicable to triune God and in some ways it is not.

In this chapter we will use these two foundational systems thinking traditions to structure the GST and cybernetics systems thinking frameworks for the dogma of the triune God. After this we will populate both frameworks with orthodox theological data concerning the nature (*ousia*) and persons (*hypóstases*) of the triune God. In brief: the scholastics describe God as the

¹⁴⁶ *Ousia*: being (that which is). Since there is only one God, he is only one ousia. The word refers to the one being of God. Before the trinitarian crisis of the fourth century was resolved, however, this word had a range of meanings, and so there was much confusion (Letham, 2019:582).

¹⁴⁷ *Hypóstasis*: Greek for "something with a concrete existence." In terms of the trinity, it came to mean person. Thus, by the end of the fourth-century controversy, it referred to what is distinct in God, the way in which he is three, while ousia was reserved for the one being of God (580).

¹⁴⁸ Also called *ekdosis* (Muller, 2017:103) and *nekrosis* (231). This is concerning putting off the old nature, dying to the world and the flesh, which is repentance (223).

¹⁴⁹ Also called *endysis* (105).

infinite, uncreated, self-existent, and necessary Spirit, one being¹⁵⁰ and three in person¹⁵¹, Father, Son, and Spirit, the eternal creator, preserver, and redeemer of all things¹⁵² (Muller, 2017:90). Since Aquinas, Barth, like Calvin, makes the doctrine of the Trinity the doctrine of God (Letham, 2019:295 & 329).

There are three sources of knowledge of God. These are called the three 'books' (Muller 2017:199) or 'lights' (206). The first two pertain to this life and the third one to heavenly (that is post-resurrection) life:

1. Nature
2. Grace
3. Glory¹⁵³

In the Reformed tradition these are equivalent to:

1. Creation
2. Word (Scripture and Christ)

Focusing on knowledge of the Triune God before glory, we will adapt these to the systems thinking frameworks, which result in:

1. Natural Theology: GST and Cybernetics
2. Revealed Theology: GST and Cybernetics
 - a. Divine Missions: *Opera Dei Ad extra*
 - b. Eternal Processions: *Opera Dei Ad intra*
3. Glorified GST and Cybernetics

¹⁵⁰ Negative GST.

¹⁵¹ Analogical Cybernetics.

¹⁵² Eminent Cybernetics.

¹⁵³ This is the "theology of the blessed" it is a clearer and fuller knowledge of the triune God which is made available after death, when we are in a state of glory (Muller, 2017:360).

4.1 Natural theology: GST and cybernetics

The argument in this chapter is that the essence of God can be partly understood by nature. Using GST negatively is useful for this. The order of nature and natural law both use GST and cybernetic frameworks. This is preparatory for the special revelation to come, which uses the same frameworks to articulate Dogmatic Theology.

Calvin, although he accepted the classical distinction between the knowledge of God available naturally and that made available by the written word of God, he did not believe that it was possible to build on the natural theology framework constructively, due to the corruption of the human mind, seeing a problem with the human mind to result in “misdirection” when studying creation, resulting in an insufficient (that is, not holistic) knowledge of God (Bray, 2014:1001).

Barth had a low view of natural theology and such an absolute view of special revelation that he perceived all human knowledge of God coming exclusively through special revelation (Bray, 2021:137). Since Barth was committed to what may be labelled a “subjectivist apologetics” he held that reason is an ineffective tool for persuading people to believe in Christ and was overruled by a personal divine experience of God’s grace (Phillips, 2006:346).

However, Brunner disagreed with his colleague and believed the view closer to the Reformers was that natural revelation has value for preparing people by providing a point of contact for the Gospel message (Lane, 2006:276). He attacked the Barmen Declaration for denying the validity of natural theology (Bray, 2014:1152). Brunner acknowledged a human “addressability” which provided capacity for revelation to bear responsibility for the rejection or acceptance of the Gospel, justifying the act of proclamation (Bloesch, 2006:171). Nevertheless, both Barth and Brunner reminded the church that “knowing God is not like studying soils” – a mere passive object of human investigation (Lewis, 2006:101).

It is our contention, however, that this does not contradict the thesis in this chapter. My argument is that GST and cybernetics can be naturally intuited and are valuable for understanding creation. They provide categories for understanding creation and are useful for that. Also, they can be in various forms of quality depending on the mind of the person. For example, the most intelligent person will be more gifted for understanding GST and cybernetics in creation. However, using such a mind with regards to what is revealed by the written word of God, is not guaranteed.

The problems arising in the worldviews that bring forth the Plotinian ambiguity, for example, are not always merely moral, but misapplication for multiple reasons. It is my belief that GST

and cybernetics are useful tools when in submission to the special revelation found in the written Word of God if the mind is submissive to it. Not only this, but I do believe these frameworks were in **operation** by the Scriptural writers themselves, as they sought to communicate what was revealed to them.

We are all born ignorant of the triune God but ready (to different degrees) for the fellowship and relationship only He can provide us: “God created humanity for relationships: relationships with each other, with nature, and with God.... Deep, meaningful relationships require knowledge of the other person” (Vander Lugt & Galan, 2012:1).

There is a limited amount of knowledge of God in the natural order available to reason through general or natural revelation or the natural knowledge of God (Muller, 2017:67). This is also termed “the light of nature” which is the way to describe human reason and facilitates human beings from “grasping the revelation of God in nature” (206). All people are tempted to create their own spiritual reality, based on intuition (Wells, 2012:10) and the triune God is behind “an invisible boundary” that we cannot cross. Before the availability of Dogmatic Theology, derived from the written word of God, natural theology provides an **implicit** form of knowledge of God which is a flawed framework for the special revelation to come. By means of common grace (Muller, 2017:142), the bare minimum facts are that God exists and He is transcendent and “beyond our universe and intelligence and imagination” – distinct from creation (Vander Lugt & Galan, 2012:4).

Natural theology allows for the possibility of a transcendent and personal God but without special revelation the details about relations between such a God and humanity remain obscure and ambiguous. Abstract knowledge of God is through both “natural and supernatural revelation” (Muller, 2017:67). Protestant scholastics have rejected **double truth** and “argued instead that theology never contradicts reason directly but frequently supplies truths of revelation that transcend the powers of reason” (100). By general revelation and natural theology, we can perceive order in the form of open, cybernated systems and in the form of cybernetic systems. We do not need special revelation to inform us when something is against the natural order (79). We are naturally dianoetic beings (91). Therefore, there are common notions (190 & 235) which are basic ideas engraved or implanted in the human mind naturally belonging to all people. The means of knowing (214) in natural theology as well as revealed theology (that is, within Scripture) is reason. I believe these common notions are of two types: GST (pertaining to open systems) and cybernetics (pertaining to direction). These are the rational frameworks which revealed theology can complete, correct, and restore.

Natural theology is a metaphysical system which can thus deal with God as being and first mover and therefore creation. Revealed theology, which is distinguished by its articulation of the mysteries of the faith (that is, doctrines known by revelation which cannot be gleaned by reason alone (226)) can address God as God which includes what is gleaned from natural theology but also intellectual, volitional, and moral attributes of God (219). So, GST and cybernetics systems thinking are complementary metaphysical frameworks applicable to both natural and revealed theology.

4.1.1 Natural theology and GST

We can perceive general systems: openness/cybernated, boundaries, hierarchies, and emergence/design pattern/downward causation. Through creation it is possible to reason how God is not a system. He is unlike composite systems all around us since He is simple. There are theological subjects which we can perceive from the imperfect general revelation framework within natural theology. While God is simple all human beings are compound: "Made up of parts; composite" (Barrett, 2021:320). Likewise, God is pure act while humans exhibit passive potency (322).

We all have a somewhat functional, incomplete, and imperfect framework, which special revelation corrects, completes, and restores for us. Thus, in natural theology, we are given a 'natural pattern' which is perceivable and understandable and conforms to our epistemological categories. Natural theology has already prepared us, albeit an incomplete preparation, to conceive of negative attributes of God (God is transcendent to everything we perceive).

Within the established framework of general revelation found in natural theology we populate the data from special revelation found in dogmatic theology into the dogma of the triune God. The dogma corrects, completes, and restores the existing general revelation framework found in the humble human heart. Hambrick's book *God's Attributes: Rest for Life's Struggles* (2012) uses 16 attributes of God in a way that intends for the reader to both rest in and emulate (10). Resting means asking yourself, "Do I take pleasure, comfort and security in this attribute of God?" (11) while emulating means asking yourself, "Do I increasingly resemble this attribute of God?" For him (14) the core attribute of holiness in the triune God consists of four quadrants: love, essence, wisdom, and power. Since all four quadrants ultimately communicate the triune God's holiness, we are meant to both rest in and emulate this. This resting and emulation of

holiness means, logically, resting in and emulating the four quadrants: love, essence, wisdom, and power.¹⁵⁴

4.1.2 Natural theology and cybernetics

Natural theology is the necessary albeit insufficient framework for special revelation concerning the being and persons of the triune God. Dogmatic Theology concepts of mutual indwelling/coinherence/perichoresis found within the great mystery dogmas and doctrines (within the triune God, the hypostatic union in Jesus Christ, and salvation¹⁵⁵) are unavailable within general revelation and therefore alien to natural theology.

Muller (2017:190) defines *koinonia* as including the three overlapping relational concepts of community, communion, and communication. Although these definitions are usually for the use of *koinonia* as it applies to the Christian life, it still is an idea present in human society in one way or another. We can perceive and understand **human communication, human communion, and human community** from creation. By engaging and observing other persons (human beings), and by perceiving the unity, teachings, and practices of the church, we attain a natural understanding of these spiritual and personal activities. From general revelation we can glean ideas of *koinonia* which the special revelation then corrects, clarifies, and completes. Calvin emphasised that God reveals himself in creation (2019:525) which he referred to as an “eikon” (529). Nevertheless, from creation alone it is ambiguous whether the triune God is relational, like the people we have observed. Does the divine being communicate with humans? Does He live alone or in some community? Does He commune with creation?

In addition to these natural ideas of relation, we can understand cybernetics concepts of system effectiveness, system efficiency, and system efficacy based on our experience of them in everyday life. We can also understand general control problems in everyday life of being, behaviour, and becoming. General revelation and natural theology are useful for preparing our minds to understand the triune God as **cybernator**. Through creation we are prepared to understand how the triune God is cybernetic. Comparable to cybernetic systems all around us, He measures performance of his creation. This also means He solves general control problems of all systems: being, behaviour, and becoming. By the immanence of the triune God in creation He originates, maintains orderly operations, and gloriously transforms creation. Natural theology has already prepared us, albeit an incomplete preparation, to

¹⁵⁴ Hambrick's (14) full list of attributes for each quadrant are: love (personal, grace, good, and patient); essence (omnipresent, eternal & unchanging, beauty and blessed); wisdom (order & peace, truth, just and omniscience); and power (free, omnipotent, sovereign, and wrath & jealousy).

¹⁵⁵ Gifford (2011:2) makes a good case for salvation as the third kind of mutual indwelling, following trinity and Christology.

conceive of positive attributes of God *ad extra* (in the divine missions, God the Son and God the Spirit act like cybernetics systems we perceive). This also provides an analogical tool for understanding God *ad intra* (God the Son and God the Spirit eternally proceed).

Table 11 Natural theology: Systems thinking frameworks for knowledge and being

Natural Theology	
Systems Thinking Framework	Knowledge and Being
	Analogical categories
1. Cybernetics (cybernetic systems in creation)	1. Information
	2. Feedback
	3. Control
2. GST (cybernated systems in creation)	1. Openness/cybernated
	2. Boundary/enviored
	3. Hierarchy/nestedness
	4. Emergence (design pattern/downward causation)
3. Divine simplicity	Inferred Creator

4.2 Revealed theology: GST and cybernetics

Applying the **system principle** to the dogma of the triune God we can state that the whole dogma is greater than the sum of its 'parts', that is, the terms composing the proposition. Inasmuch as it aligns with and reflects the written word of God, the dogma of the triune God regulates the church on the triune God's behalf. The Scripture is the foremost or primary source of theology (Cole, 2020:16 & Thompson, 2022:165-169). Barth rightly saw theology as "theology of the word" (Lane, 2006:274) - the word of God is the revelation of God in creation and thus the subject to be studied: "God's one word to humanity is in Jesus Christ. All of God's dealings with humanity are in and through Jesus Christ.... All doctrines are to be interpreted Christologically" (279).

This sacred teaching on the being and persons of God are the main **scepter**¹⁵⁶ that the ascended Christ uses to rule his church. The dogma of the triune God, as a created epistemological servant of God, is a proposition, divinely cybernated, distilled from, and reflecting the purpose of the written word of God. Although we have acknowledged a form of natural theology available through GST and cybernetics systems thinking categories available

¹⁵⁶ Calvin uses the image of the "scepter" to articulate Christ's divine dominion and how it is exercised on earth.

to all, we always insist with Barth and Brunner (Bray, 2014:1167) on the need for a personal experience with the triune God (through the word and Dogmatic Theology) to experience regeneration, sanctification, and glorification.

4.2.1 Human soul

The dogma of the triune God is the epistemological means that the triune God uses to align the human soul to truth. Since the human soul is associated with the human body, we use anthropological language to explain the main instruments that are affected: head, heart, and hands. The dogma of the triune God communicates truth to the head, divine values to the heart and divine practical advice for the hands. In transitioning from the propositions and narratives of the written word of God to the dogma of the triune God in propositional form it is fundamental to answer three questions:

4.2.1.1 ‘Head’

Truth about the nature (*ousia*) and persons (*hypóstases*) of the triune God. What ought we to believe about the nature and persons of the triune God? This is orthodoxy or right opinion on the nature and the persons of the triune God.

4.2.1.2 ‘Heart’

Spirituality regarding the nature and the persons of the triune God. What ought we to value about the nature and the persons of the triune God? This is orthokardia or right-heartedness towards the nature and the persons of the triune God.

4.2.1.3 ‘Hands’

Existential/practical effects of the nature and the persons of the triune God. How ought we to live for the triune God? This is orthopraxy or right practice of life for and with the triune God.¹⁵⁷

All three categories are relevant to the dogma of the triune God. The written word of God is special revelation (divinely revealed information) about mutual indwelling and divine shepherding (divine control). This special revelation reveals one Being in three persons. According to the cybernetic influence of the written word of God, the resultant special

¹⁵⁷ Sanders (2017:121) calls the head, heart, and hands, collectively “the soul” and notes Latinate forms: intellect, emotion, and volition.

revelation provides the following data, arranged in GST and cybernetics system thinking frameworks:

1. The triune God is not an open system. Thus, the Creator-creature distinction.
2. The triune God is cybernator of creation, Christ's human nature and church. Thus, the Creator-creature relation.

The divine-human feedback cycle of the dogma of the triune God and church will check on the truth, spirituality, and existential/practical output of church, correcting it propositionally. The dogma of the triune God can increasingly control the head, heart, and hands of church, through propositions concerning the dogma of the triune God.

4.2.2 Incommunicable (negative) and communicable (positive) divine attributes

The incommunicable attributes, which “find no analogy in the finite order and cannot be conceived as in any way transferable to creatures” (Muller, 2017:44) belong only to the triune God and include: triunity, oneness, transcendence, infinity¹⁵⁸, eternality, creator, omnipresence¹⁵⁹, and immutability¹⁶⁰ (Vander Lugt & Galan, 2012:2). These cannot be explained with a GST framework, and so are understood as “negative attributes”.

The communicable attributes belong to both the triune God, maximally, and his creation, especially humans in his image, and maximally, Jesus Christ. Some of these are: loving, holy, good, just, jealous, merciful, sovereign (authority)¹⁶¹, omnipotent¹⁶² (powerful), knowledgeable (omniscient), patient, faithful, and spirit. These can be understood in cybernetics systems Thinking, eminently (*ad extra*¹⁶³) as “positive attributes”, and by analogical inference (*ad intra*¹⁶⁴). Jüngel, citing Barth, perceived the *ad extra* as the expression of the *ad intra* inner being (Bray, 2014:1181) and asserts that for Barth, the subject of God's being is his being known and becoming known (Letham, 2019:330). From the divine missions, we understand the eternal processions.

¹⁵⁸ Another name for infinity is magnitude or “greatness” (Muller, 2017:207). The divine essence is limitless as understood as eternity and immensity (omnipresence) in contrast to time and place without reference to Creation they are terms infinity and immensity (172).

¹⁵⁹ This is associated with the concept of *immediatio suppositi* – the immediacy of the self-subsistent individual or being (161).

¹⁶⁰ “God is understood as free from all mutation of being, attributes, place, or will and from all physical and ethical change” (Muller, 2017:162).

¹⁶¹ He has the power, dignity, and influence in himself, which He also shares with others (46).

¹⁶² This is associated with the concept of *immediatio virtutis* – the immediacy of effective power (161).

¹⁶³ “External, outward, toward the outside” (12).

¹⁶⁴ “Internal, inward, toward the inside” (13).

4.2.3 Word of God¹⁶⁵

The dogma of the triune God is controlled by the word of God. Barth rightly sees the word of God as being communication in three forms: revelation, Scripture, and preaching (Bray, 2014:715). Barth's concept of "revelation" here, means the incarnation of Jesus Christ in space-time (1153) which revealed that God is a trinity of persons (1159). Letham (2019:330) perceives a kind of perichoretic "trinitarian" model in Barth's threefold word. Since Barth saw "revelation" as the starting point of knowledge of the triune God – it is the triune God who is revealed to us (Bray, 2014:1162) – he preferred the "modes of being" description to "persons" which he said implied three conscious subjects. Rahner concurred (1191). Only by special revelation can we learn clear details about the triune God through the divine missions within the *opera dei ad extra* of God the Son and God the Holy Spirit *hypóstases*¹⁶⁶. By using the economic trinity as a framework, we can learn about the ontological trinity, with their personal properties¹⁶⁷.

The dogma of the triune God is not only cybernetic, but it is cybernated. It does not only exhibit information, feedback, and control, it is also subject to a higher order cybernetic influence. The final divine work of establishing authoritative divine direction was the canon of the written word of God¹⁶⁸. As mentioned in the previous chapter, this is the word of God embedded within creation, church, and Christ's human nature.

In the written word of God, the concepts of authority and leadership or headship are intertwined with the concept of service. God the Father is the head of the incarnate personal word of God (1 Cor. 11:3). Likewise, Jesus Christ, while being the head of the church (Eph. 5:23) is nevertheless the servant of the church. He modelled and taught this leadership-service with the authoritative apostolic band (Luke 22:21-27). Since the personal word of God (divinely revealed in the incarnation or the "assumption of the flesh" (Muller, 2017:43)), the Holy Spirit (divinely revealed at Pentecost) and the written word of God (divinely revealed in writings)

¹⁶⁵ In this chapter, I limit my use "word of God" to include both the incarnate personal word of God (Jesus Christ) and the spirated written word of God (the Bible).

¹⁶⁶ This is known as *epignosis* – knowledge of divine truth (109).

¹⁶⁷ There are five divine properties: paternity, filiation, active spiration, passive spiration, innascibility. These are, in each case, characteristics possessed by one of the *hypóstases* only in connection with the eternal relations that each possesses.

¹⁶⁸ Through *amanuenses* (secretaries or scribes), aka "penmen" (Muller, 2017:22), the triune God being the "primary author of sacred Scripture" (46).

inform, regulate, and direct creation, church, and Christ's human nature¹⁶⁹, their special revelation regarding the being and persons of the triune God are aligned.

The written word of God communicates special revelation about the triune God in both narrative and propositional forms. The incarnate personal word of God likewise communicated special revelation about the triune God, verbally and non-verbally, and narratively and propositionally. The dogma of the triune God is distilled from those sources. The dogma of the triune God must be faithful to God himself as well as to the word of God. Articulating the dogma of the triune God faithfully is comparable to an offering to God himself. Barrett (2021:320) defines **classical theism** as: "The majority position of the church from the first through seventeenth centuries. Classical theism embodies trinitarian orthodoxy as represented by the Nicene Creed and the Great Tradition but has been jettisoned by modern thinkers".

The dogma of the triune God is the collection of this information in propositional form, tracked over post-Creedal church history. The dogma of the triune God is merely a created epistemological servant to the special revelation of the word of God. The Nicene Creed, which defends the deity of Christ¹⁷⁰, automatically defends the dogma of the Triune God. Since both are concerned with *ousia*, and *hypóstases*, they are inseparable (Wells, 2012:27).

4.2.4 Worldview throughput

The dogma of the triune God, as church worldview regulator, has a three-stage process, together called throughput: input, transformation, and output.

4.2.4.1 Input

Partially or totally false propositions in the worldview milieu, surrounding the dogma of the triune God concerning the concept of God, 'enter' it from the relevant environment. The way this happens is that a person's worldview or heart or reason is confronted propositionally by the dogma of the triune God. The heart will already have its own answers in propositional form to these fundamental questions, whatever the human heart answers to these questions are, they will be drifting in the relevant environment. Gifford (2022:11-12) informs us that there are two major categories of Christological heresy:

¹⁶⁹ These three (creation, church, and Christ's human nature) are the major cybernated systems, all being cybernated by the triune God but in distinct ways.

¹⁷⁰ "Nobody should argue that Christians had to wait until the year 325 to know that Jesus was divine! But the clarity of the theology of Nicaea was a real step forward in saying what we believe... in knowing that we know." (Sanders, 2017:258).

1. Dichotomist-Dualist (including Ebionism, Arianism, and Nestorianism) which attack Christ's **divine** nature.
2. Monist (including Docetism, Apollinarianism, and Monophysitism) which attack Christ's **human** nature.

Without the balancing influence provided by the doctrine of the hypostatic union, theology swings over to one side or the other. A similar issue exists in the worldviews. We can see that there is an imbalance toward *ousia* or *hypóstases*. This can be seen as modalism versus tritheism. The dogma of the triune God is a healthy balance of unity of being and diversity of persons. Correct application of GST (*via negativa*) results in the One, Simple Transcendent *Ousia* whereas correct application of cybernetics results in the divine missions (*via eminentiae* to *opera dei ad extra*) and eternal processions (*via analogia*) of the Son and Spirit. These two provide enough theological grounding to infer the begetting and spirating Father (who is unbegotten), resulting in an understanding of the *opera dei ad intra*, the ontological trinity.

4.2.4.2 Transformation or metamorphosis

The dogma of the triune God liberates, sanctifies, and glorifies church with **truth**. The dogma of the triune God has truth in the form of this proposition: God is one being in three persons. The worldview or heart or reason is confronted with this Christian theological proposition. It then faces a choice to reject, accept or amend the partially or totally false propositions to align with the orthodox Christian theological proposition regarding the nature and persons of the dogma of the triune God, leading to either rejection, acceptance, or amendment of the Christian theism worldview proposition regarding the nature and persons of the dogma of the triune God.

4.2.4.3 Output

The dogma of the triune God is a propositional truth that causes transformation of the worldview. The dogma of the triune God produces the Christian theism worldview regarding the nature and persons of the dogma of the triune God in propositional form. The dogma of the triune God - worldview output can be of two kinds: glorifying the higher system (the ascended personal word of God) or waste. Useful output would be the glorifying Christian theism worldview regarding the nature and persons of God in propositional form. Worldview waste regarding a person's theological worldview is rejected and expelled non-glorifying heterodox propositions concerning the nature and persons of God. The input to one system may be the output from the subsystem: this explains how the Christian theism worldview

develops over time. For example, internal heresies regarding the person and work of Jesus Christ produced more and more nuanced and careful definitions of orthodox Christology. Therefore, we see various ecumenical councils refining the dogma of the triune God over time.

4.2.5 Negative GST

Applying the **system principle** to the dogma of the triune God we can state that the whole dogma is greater than the sum of its 'parts', that is, the terms composing the proposition. The triune God is not composite, the dogma of the triune God is composite. To properly understand how the dogma of the triune God serves God's will, we must understand how the dogma of the triune God has the properties of a cybernated system.

The dogma of the triune God system is a propositional arrangement of terminological 'parts' or sub-axioms, exhibiting behaviour or meaning that the individual terms do not. It has emergent theological properties or synergetic effects: sanctifying, liberating and glorifying truth concerning the nature and persons of the triune God. Like all truth, the dogma of the triune God comes with the transcendentals: goodness and beauty. It is a composite, created servant of the written word of God, has constancy over time and goal-directedness. The dogma of the triune God exhibits and extols order, pattern, and purpose. Unlike a goal or objective, the dogma of the triune God's purpose or final cause is relentlessly pursued but is ultimately unattainable. The human understanding of the nature and persons of God is complete or whole but never 'perfect'.

4.2.5.1 Order, pattern, and purpose

There is truth, goodness, and beauty in the dogma of the triune God as a whole. It is orderly since it is assembled and presented in a systematic way and that is why it is the founding member of systematic theology. The dogma of the triune God also presents order in the *hypóstases* of the triune God: it is called *ordo theologiae*. The dogma of the triune God has a creedal pattern and presents the triune God in a pattern-like way: these are the eternal relations of origin. The purpose of the dogma of the triune God is the reason it exists and that is how to measure its functional success. Does it result in orthodoxy, orthokardia, and orthopraxy? Serving the written word of God's purpose or final cause of Christoformity: liberation, sanctification, and glorification, the dogma of the triune God's purpose final cause is the reason it exists and indicates how to measure its functional success: "All Scripture is God-breathed and is useful for teaching, rebuking, correcting and training in righteousness, so that the servant of God may be thoroughly equipped for every good work" (2 Tim. 3:16-17, NET).

Table 12 System design and dogma of the triune God

System design	Dogma of the triune God
1. Order	Orderly arrangement.
2. Pattern	Trinitarian creedal pattern.
3. Purpose	Orthodoxy, orthokardia, and orthopraxy

The dogma of the triune God, having this purpose, presents divine purpose in the missions and processions of the Son and the Spirit. The purpose is primarily presented by the missions of the Son and the Spirit (incarnation and sanctification, respectively) which then infer the purpose of the eternal processions (eternal generation and spiration). In addition to showing organisation, the dogma of the triune God as a system has these attributes:

4.2.5.2 Continuity of identity

This is the preservation of structure amid changes. The dogma of the triune God, serving the authoritative divine direction of the written word of God, has theological constancy over time. For example, historical theology shows the biblical origin and ecclesiological development and maintenance of this dogma in since the creeds, as well as its manifold defence by leading thinkers in the church. From this we perceive that the post-creedal dogma of the triune God has continued and been preserved. historical theology teaches us that this core creedal Christian dogma has been protected until today.

4.2.5.3 Goal-directedness or teleology

The dogma of the triune God has the goal of establishing truth, goodness, and beauty¹⁷¹ in the proposition that God is one being in three persons. Theologically, this is Christoformity: the sanctifying, liberating, and glorifying function because of cybernation from the written word of God. To have goal-directedness or teleology, the dogma of the triune God must be cybernated by the written word of God, the Holy Spirit and the divinely-directed church. Ultimately, all cybernation is sourced in the cybernator, the triune God himself.

¹⁷¹ This may align with Balthasar's project, which sees a deeper analogy of being than was suggested by Barth, whereby the personal relationship established between the Christian the triune God is grounded on a deeper relationship already established between creator and creation (Bray, 2014:1193) and through which the transcendentals of beauty, goodness, and truth are the way the triune God communicates to creation as well as "binds it to himself" (2014:1194).

Table 13 System design and dogma of the triune God

System design	Dogma of the triune God
1. Continuity of identity 2. Preservation of “structure” amid changes 3. Constancy over time	One truth (that is, the Creator-creature distinction and relation).
1. Goal-directedness 2. Teleology	One goal (that is, glory).

4.2.6 Behaviour

The dogma of the triune God is embedded in a living being – the church – and so it has real-world output. The dogma of the triune God’s ‘behaviour’ is this set of attributes present in the real-world in church: The propositional answer to questions of the ‘head’: truth about the nature and persons of the triune God; the ‘heart’: spirituality towards the triune God; and the ‘hands’: existential/practical service of the triune God. The dogma of the triune God is identified by its behaviour. As a system, the dogma of the triune God satisfies the three behavioural conditions:

1. Behaviour of each term effects the behaviour of the whole dogma of the triune God. For example, holding to any of the six Christological heresies listed in *Hexagon of Heresy* (2022:12)¹⁷² due to wrongly defining the two key terms, results in a theological system that is completely disintegrated.
2. Behaviour of terminological parts is interdependent. For example, holding to an unorthodox definition of *ousia* negatively effects the understanding of *hypóstases* and vice versa.
3. In whatever way the subsystems (the individual terms) are formed (defined), both influence the behaviour of the whole dogma of the triune God: they are not independent (which would mean no effect). For example, the word *ousia* and the word *hypóstases* must be in harmony: distinct yet related.

The behaviour of the dogma of the triune God finally is observable by its creedal output. The dogma of the triune God, although it is a conceptual and not a physical system, exhibits ‘behaviour’ since it has output: creeds.

¹⁷² Ebionitism and Docetism, Arianism and Apollinarianism, and Nestorianism and Monophysitism.

4.2.7 *Ousia* and *hypóstases*

The triune God can be reflected upon *ousiados* – essentially or *hypostatikos* – hypostatically or personally (Muller, 2017:155). When we confess that “God is one being (*ousia*) in three persons (*hypóstases*)” this is irreducible¹⁷³. It is the simplest possible articulation of the dogma of the triune God. Naturally this proposition requires further explanation of the terms and concepts behind being (*ousia*) and person (*hypóstasis*¹⁷⁴). As Gifford (2022:3) states, “I will contend, along with John of Damascus, that all of the great Christological heresies confuse person and nature.” Asking “who?” and asking “what?”¹⁷⁵ are two different questions with two different answers. Much heresy came by simply confusing these questions and answers as early Christians wrestled with Hellenistic concepts of being and personhood. As we will see later, the discussion of divine missions moves the conversation from the what to the who (Vidu, 2021: xiv).

The dogma of the triune God is cybernated and so the exact terms used are interdependent. The dogma of the triune God resists unidirectional dependence of one term on the other and it resists independence of either term. When it comes to the structure of dogma of the triune God there are three necessary properties of the terms *ousia* and *hypóstases*: the set of relations; their positional value, and their dimensional domain. These three structural properties of all systems help us distinguish between an aggregate and a system. With an aggregate there would be, for example, no ‘positional value’ in the relations between the terms *ousia* and *hypóstases* and the whole dogma of the triune God.

4.2.7.1 Terminological relations, positional value, and dimensional domain

Once the creeds were complete, the terms of the dogma of the triune God – *ousia* and *hypóstases* – are presented to the reader as an integrated unit. Confessing the one simple nature of the triune God is the starting point and from there we move to the three distinct persons, understanding the dogma as an integrated unit. The dogma of the triune God is codified in the creeds and published as an integrated unit of terms. Since the dogma of the triune God is the servant of special revelation, which is divinely communicated data, it must exist within a concrete system. This concrete system is the creeds in published form, and then all published works derived from Christian reflection on the creeds.

¹⁷³ “Distinction is one thing, separation is another” (Muller, 2017:20).

¹⁷⁴ Also known as *persona* or *subsistentia* (155).

¹⁷⁵ The divine attributes are understood to be the finite mind’s declarations to answer the question: Who is God? (43).

4.2.7.2 GST systems thinking tradition

The systems thinking tradition of GST has always been present in the dogma of the triune God since it has always been concerned with clearly proclaiming and teaching the output of the exclusive canon. The dogma of the triune God, since it is a product of the truth of the canon, coming from and after the creeds to assist the mission, can be understood in the major GST categories: openness/cybernated, boundary/enviored, hierarchy/nestedness and emergence/design pattern/downward causation. In engineering a whole conceptual system of the dogma of the triune God, we bear in mind these four parameters that are likewise true of the written word of God which is the divine authority (within creation) for the church.

4.2.7.2.1 Openness/cybernated

The dogma of the triune God is a cybernated open system engineered from the creeds. The creeds were engineered by the post-apostolic Christian leadership from the explicit canon, at the seven ecumenical Councils, in response to the challenges of the six major Christological heresies.

4.2.7.2.2 Boundary/enviored

The dogma of the triune God boundary/enviored is defined by the seven ecumenical creeds. The creeds have a boundary. There is a defined orthodoxy. As the creeds have a boundary, the dogma of the triune God has a boundary¹⁷⁶. The dogma of the triune God boundary, like all boundaries, is difficult to locate. It is mostly determined by several criteria which the terms must fulfil to be considered within the dogma of the triune God system. Why identify the dogma of the triune God boundary? Without identifying the dogma of the triune God boundary, it will be difficult or impossible to identify the relevant environment outside of the system. The relevant environment is everything outside the dogma of the triune God boundary (the worldview milieu that produced the six major Christological heresies). The boundary surrounds the dogma of the triune God in such a way that the intensity of interactions across this line is less than that occurring within the dogma of the triune God system. In other words, the focus in the orthodox articulation of the dogma of the triune God is primarily confessional and secondarily apologetic.

¹⁷⁶ Outside the boundary are the heresies found in the “Hexagon of Heresy” and other lesser forms of heterodoxy. The hypostatic union naturally provides orthodox categories of naturehood and personhood which carry over to the dogma of the Trinity and salvation. The creeds are the product of Biblical Theology as summarised in distilled form by the Church.

Crossing the orthodoxy boundary requires transformation or conversion. When it comes to data coming from the worldview milieu, the theological boundary of dogma of the triune God has a coding and decoding property. This means that the terminological output (that is, the creedal strict re-definition of the terms *ousia* and *hypóstases*) is not identical to the terminological input (the contemporary definitions of the terms *ousia* and *hypóstases* and related concepts, prior to creedal formation). As the church wrestled with the fact that the written word of God is the highest authority for faith and practice, they had to make a distinction between the definitions of *ousia* and *hypóstases* which previously had been considered synonymous¹⁷⁷. Dogmatic interface is necessary for when conceptual systems do not interact boundary to boundary. Here we see the value of the creeds in propositional form which provides a shared space for debate between the dogma of the triune God terms *ousia* and *hypóstases* and the competing six Christological heresies.

4.2.7.2.3 Hierarchy/nestedness

“Creation is not coeternal with God. Before the beginning of the created world, God dwelled alone” (Wells, 2012:8). These two truths together compose all revealed, knowable truth about **being**. Since the dogma of the triune God is a system, it is a: 1. **Supersystem**. Each of the two terms *ousia* and *hypóstases* in propositional form composing the dogma of the triune God are composed of their own subsystem collections of integrated connotations and denotations in propositional form, and 2. **Subsystem**. It is ontology: truth about the *ousia* and *hypóstases* of the triune God (necessary being). The other subsystem is truth about creation *ex nihilo* (contingent being).

Table 14 Hierarchy/nestedness of Ontology

Supersystem	Being		
System	Contingent being: doctrine of <i>creatio ex nihilo</i>	Necessary being: dogma of the triune God	
Subsystems	Nature and persons.	<i>Ousia</i> (divine nature).	<i>Hypóstasis</i> (divine persons).
		Divine simplicity.	Personal relations.

¹⁷⁷ “Up until (the time that Basil countered the Eunomians) the two terms had been confusingly used as synonyms throughout pagan and Christian history alike. Here is the first great step of Christian theology breaking new ground in rearranging existing terminology to fit its new metaphysical categorical insights. In trinitarian theology, *ousia* will become essence or being, while *Hypóstasis* will become person” (Gifford 2022:48, parenthesis mine).

4.2.7.2.4 Emergence/design pattern/downward causation

The dogma of the triune God holistically manifests emergent properties of Christoformity: liberty, holiness, and glory. This is crafted by the intelligent intentions of God along with, and through submitted human beings, that is, Spirit-filled Christians. The dogma of the triune God exhibits theological emergence from a simple, terminological, axiomatic proposition.

4.2.8 Skyttner's 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties of the dogma of the triune God, we can focus on more detail. The dogma of the triune God is an open system cybernated by the written word of God. Using Skyttner's irreducible properties of systems, we can summarise them into 10 conceptual principles applicable to the dogma of the triune God.

4.2.8.1 Interrelated and interdependent terminological parts

The dogma of the triune God is composed of terminological "parts" (that is, the discrete terms *ousia* and *hypóstases* in propositional form). These terminological parts are in union: they are integrated because they are in mutual relation and mutual dependence or 'service'. The terminological proposition is not in disunity. Disunity occurs from one-way terminological dependence (*ousia* depends absolutely on *hypóstases* or vice versa) or by being terminologically unrelated or independent (*ousia* and *hypóstases* are unrelated terms).

4.2.8.2 Propositional holism

This means 'the big picture' comes first. A holistic priority in the dogma of the triune God is necessary and positive. Any form of reductionism¹⁷⁸ which focuses primarily or merely on terminology is not exhaustive, comprehensive, and holistic. This is how it was possible to confess the *ousia* and three *hypóstases* while definitions for them were still being challenged by the six Christological heresies.

4.2.8.3 Teleological dogma

The dogma of the triune God has the goal of Christoformity: to sanctify, liberate and glorify Christians through divinely communicated truth regarding the nature and persons of the triune God. The liberation, sanctification, and glorification of church, through the dogma of the triune

¹⁷⁸ Sanders (2017:254) notes that reductionism in conceptualising the triune God is called sub-Trinitarian.

God will manifest systematically as interdependence with Christians¹⁷⁹, dependence¹⁸⁰ on the transcendent triune God, and independence from heresy¹⁸¹.

4.2.8.4 Propositional transformation

Active and beneficial conversion within the relevant environment. The relevant environment for the dogma of the triune God is the worldview milieu, theological propositions in human hearts, surrounding Christian theism. The foundational ones are the six Christological heresies. The dogma of the triune God, as distilled truth, converts the partially or totally false theological propositions in hearts to the Christian theism worldview in propositional form. The conversion is to orthodoxy, orthokardia, and orthopraxy with regards to the nature and persons of the triune God. This is the collective worldviews or hearts of all humanity, in propositional form.

The dogma of the triune God, which is truth concerning the uncreated being, converts the theological worldviews of those hearers who respond with a humble heart to allegiance to King Jesus. The conversion of the hearts (worldviews) of hearers is salvation from sin and death due to the orthodox re-definition of the nature and persons of God within people. Whatever definition a person has for one or both terms must be correctly defined for them to properly confess the truth.

4.2.8.5 Propositional inputs and outputs

The relevant environment surrounding the dogma of the triune God (that is, the theological worldviews of sinful human hearts in propositional form) continually provides inputs (partially or totally flawed propositions concerning the nature and persons of the triune God) which are then converted into the orthodox creedal proposition aligned with the truth of the nature and persons of the uncreated creator (that is, the Christian theism worldview in propositional form). The dogma of the triune God has the following propositional throughput:

Partially or wholly false propositions from the theological worldviews of sinful human hearts. Conversion of partially or wholly false theological propositions to the true theological proposition found in dogma of the triune God. Orthodox creedal theological worldview in the heart in propositional form.

¹⁷⁹ See *ἀγάπη*, especially in 1 Cor. 13:1-13.

¹⁸⁰ See *πίστις*, Rom. 3:28.

¹⁸¹ See *αἰρέσεις*, which Paul considers a “work of the flesh”, in 1 Cor. 11:19, Ga. 5:20, and 2 Pe. 2:1.

4.2.8.6 Negentropic proposition

Reformed Scholasticism¹⁸² distinguishes between the Scripture and the triune God (the revelation and the one who reveals Himself) as the two foundational subjects of all theology (Muller, 2017:288-289). The former is the means, and the latter is the subject. Special revelation concerning the *ousia* and *hypóstases* is necessarily in the form of information which is negentropic.

The dogma of the triune God, being information, seeks to bring theological propositional order (truth about the nature and persons of the triune God) to human hearts (worldviews) by reducing theological propositional disorder (untruth about the nature and persons of the triune God). The theological propositional disorder exists in the surrounding sinful world which is replete with partially or totally false propositions about the nature and persons of God. The cause of this entropy is natural theology which although a framework for sacred theology, is inherently flawed and broken.

4.2.8.7 Regulated (cybernated or controlled) by authoritative divine direction

The dogma of the triune God is cybernated by the written word of God (which always includes the Spirit) together with the 'Great Tradition' of the church (which is itself a pneumatically-cybernated community) who regulate it by detecting and correcting necessary deviations through feedback which results in propositional stability in the form of terminology in dynamic equilibrium. Historical theology shows us the generally accepted creedal statements as the result of the seven ecumenical councils.

4.2.8.8 Terminological hierarchy/nestedness

As stated previously, the dogma of the triune God is an integrated system of revealed knowledge concerning the nature and persons of the triune God. And so, the dogma of the triune God (theology proper) together with the doctrine of creation compose the ontology supersystem (that is, all possible knowledge of being). The dogma of the triune God is composed of two terms which appear consecutively as systems in their own right: *ousia* and

¹⁸² I think my perspective would be called Systems Thinking Theology but I would draw my terms from Reformed Scholasticism which seems to be the most robust terminological source. I personally found Muller just to be the most robust in terms of a highly conventional language. For me, I wanted theology to have as universal a theological language as, for example, medicine. The Reformed Scholastics seem to have a definite term for everything which for me just made it extremely clear on the main subjects I was investigating.

hypóstases. The one simple nature of the triune God is confessed before the three distinct *hypóstases*.

4.2.8.9 Terminological differentiation

The dogma of the triune God has one function in service of the written word of God. This is concisely communicating truth in propositional form to sanctify, liberate and glorify Christians. Nevertheless, the dogma of the triune God proclaims and teaches this knowledge in a pair of discrete terms – *ousia* and *hypóstases*. Each term reflects its own subject in language, and we cannot understand one term without reference to the other, they come as a pair.

The dogma of the triune God has functional division and co-ordination of labour among the terms. Each term in dogma of the triune God is distinct and focused on knowledge about the triune God in some discrete concept. For example, the term *ousia* will articulate the unity and simplicity of the nature of the triune God whereas the term *hypóstases* will articulate the three persons of the triune God. These two terms together are fundamental for formation of a holistic orthodox dogma of the triune God in propositional form. These two terms were re-defined and assembled with thoughtful consideration over centuries in the creeds from the seven ecumenical councils.

4.2.8.10 Equifinality and multifinality

The dogma of the triune God has equally valid alternative ways of attaining the same objectives (liberty, holiness, and glory) from different initial conditions of a person's theological worldview propositions by revelation convergence. An example here would be that a person's worldview holds to one simple transcendent God. This person would find their theological worldview proposition converging with the dogma of the triune God. Gifford (2022:135) sees this as one of the two logical outcomes of the Plotinian ambiguity: god is the world (monism-panentheism).

Conversely, the dogma of the triune God has equally valid alternative ways of attaining the same objectives from a given initial state of worldview theological propositions will obtain different and mutually exclusive objectives by revelation divergence. An example here would be that a person's worldview holds to many gods. The person would find their theological worldview proposition diverging from the dogma of the triune God.

To reiterate, to accomplish sanctification, liberation and glorification, the dogma of the triune God converges the theological propositional content of a person's heart or worldview (from a

state of revelation diversity). An example here would be a deist person believes that God is only transcendent and thus distinct from creation¹⁸³. Likewise, to accomplish liberation, sanctification, and glorification, the dogma of the triune God diverges the theological propositional content of a person's heart or worldview (from a state of revelation uniformity). An example here would be a pantheist¹⁸⁴ person believes that God is only immanent and thus one with creation, that "nature encloses and contains the sacred" (Wells, 2012:11) and although God is one in his being, He is not identical with Creation. Gifford (2022:135) sees this as the other of the two logical outcomes of the Plotinian ambiguity: the world is god (pantheism)¹⁸⁵.

4.2.9 The dogma of the triune God as an integrated system

From this overview of the dogma of the triune God as an open system, we conclude with the threefold GST theme true of all cybernated open systems:

4.2.9.1 Independence

Independence of the two terms is undesirable. Therefore, the terms *ousia* and *hypóstases* are not independent of one another. Absolute ontological independence is a property of God alone. In all reality there is only one truly independent being, and that is the triune God. He is necessary and everything else is contingent. This means that there is nothing that is truly ontologically independent as He is. Any being that seeks independence is pursuing something that although it may seem attainable, is impossible. This independence is true ontologically, metaphysically and within systems which are all contingent (everything is contingent and dependent).

4.2.9.2 Unidirectional dependence

One term depending absolutely on another term is undesirable. The term *ousia* and the term *hypóstases* depend on and serve one another. Although dependence of terms is unequal (for example, *ousia* is first and *hypóstases* is second, both terms are foundational and central to dogma of the triune God or "core" to the Christian theism worldview), it is never one-sided, it is always mutual. Absolute ontological dependence is to be directed to God alone.

¹⁸³ "God is not united, or somehow connected, with the created universe" (Vander Lugt & Galan, 2012:4)

¹⁸⁴ Pantheism is related to eternity of matter. This idea results from an anti-trinitarian position (Sanders, 2017:74).

¹⁸⁵ We should note here Letham (2019:437) who notes that the incarnation as not being a free decision by the triune God but rather an overflow of his being leads to pantheism or panentheism (the Plotinian ambiguity). He lists Moltmann, LaCugna, Johnson, and Jenson as in this camp.

4.2.9.3 Interdependence

The two terms *ousia* and *hypóstases* mutually depending on and serving one another is desirable. Both terms are so arranged as to serve each other as an integrated unit of knowledge of the uncreated creator. This system integration is the beautifully orchestrated result of the dogma of the triune God being cybernated by the written word of God through the post-apostolic church creeds.

Now that we have created both systems thinking frameworks to construct a dogma of the triune God, we can populate them with biblical and theological data. We will use the terms *ousia* and *hypóstases* as our foundational subjects, starting with the negative GST framework, followed by the divine cybernetics framework.

4.3 *Ousia* as a non-system: Negative GST

To understand the nature of God (Muller, 2017:227) – the divine essence and attributes – we benefit by using the GST system thinking framework. As Sanders (2017:75) says,

Pondering the eternal, essential Trinity is the most concrete and biblical way of acknowledging the distinction between who God is and what he does. God is eternally Trinity, because triunity belongs to his very nature. Things like creation and redemption are things God does, and he would still be God if he had not done them. But Trinity is who God is, and without being the Trinity, he would not be God. God minus creation would still be God, but God minus Father, Son, and Holy Spirit would not be God. So when we praise God for being our creator and redeemer, we are praising him for what he does.

GST is a distinct category of systems thinking focused on openness/cybernated, boundary/enviored, hierarchy/nestedness and emergence/design pattern/downward causation. Using negative GST, the dogma of the triune God can be described or expounded in these four major GST categories. When adapted to the dogma of the triune God, negative GST is concerned with divine simplicity, divine boundlessness, divine non-hierarchy/nestedness, and divine non-emergence.

Peter Lombard, relying predominantly on Augustine, understood the triune God's being as unique and independent. Because the essence of the triune God is always the same, He is immutable, and this implies eternity which implies immortality. With regards to divine simplicity, Peter Lombard again follows Augustine's "analysis of bodies" (that is clearly GST) and

concludes that the creator is not compound. This implies immutability as well (Bray, 2021:116). Since these are not particular to any of the *hypóstases*, we can apply them to the *ousia*, which is applicable to all *hypóstases*. Bray (2021:116) sees John of Damascus's list of the attributes of the triune God as comprehensive and sophisticated. John's list deal with time, space, being and nature, answering the questions of when, where, what, and of what kind (113). This is possibly the earliest example of what I have called 'negative GST' - how the triune God is not a system. Swain (2020:55-57) will phrase this divine simplicity or denial of composition as the following: God is not composed of:

1. Parts
2. Genus and species
3. Substance and accidents
4. Potentiality and act
5. Being and essence

To engineer the dogma of the triune God we recall that there is the chain of embedded cybernation in the form of authoritative divine direction, starting with God as absolute authority¹⁸⁶ or auctor (Muller, 2017:46) and then nested in created authorised/authoritative means to aid communication and control with creation. Since the acronym GST is derived from the Greek noun, *systema*¹⁸⁷, which is always composite, negative GST serves God's will by conceptualising and modelling the dogma of the triune God apophatically, the negative way (Muller, 2017:391) which is the way of negation (*via negativa*).

4.3.1 Divine *ousia* and *hypóstases*

Asking 'who?' and asking 'what?' are two different questions with two different answers. Much heresy came by simply confusing these questions and answers as early Christians wrestled with Hellenistic concepts of being and personhood.

4.3.1.1 God is one *ousia*

To understand the one *ousia* of the triune God, we must outline how He is not a system. GST is not applicable to God because He is one substance, defined as: "What God is, the one

¹⁸⁶ The sovereignty of God: "God rules the universe and... he is not ruled by anything or anyone.... God has absolute *authority*" (Vander Lugt & Galan, 2012:11).

¹⁸⁷ See *σύνστημα* – a composition or composite whole (Muller, 2017:353).

identical being of the Father, the Son, and the Holy Spirit” (Letham, 2019:582). We can gain an absolute (Muller, 2017:3) inferential knowledge of the being of God, by negative GST. God is *ameristos* or incapable of being divided into persons (22).

4.3.1.2 God is three *hypóstases*

To understand the three *hypóstases* of the triune God, we must outline how He is cybernator, first through the two divine missions in creation, and then the eternal processions¹⁸⁸. The divine missions and eternal processions refer to God the Son and God the Spirit, not God the Father.

4.3.2 Divine *ousia* is not system

The *ousia* has no emergent properties or synergetic effects. In addition to not showing system-like **organisation**, the *opera dei ad intra* is not a system since He does not have these attributes:

4.3.2.1 Continuity of identity

This is strictly defined as the preservation of structure amid changes. The triune God has no structure. In other words, the divine *ousia*, serving no-one, and being one and simple, is immeasurable in terms of constancy over time. Nevertheless, in the *opera dei ad extra* He communicates “continuity of identity” that we can understand, as contingent, created beings. This He does through the two divine missions.

4.3.2.2 Goal-directedness or teleology

To have goal-directedness or teleology, the divine *ousia* would have to be cybernated. Since the Triune God is cybernetic (the cybernator of all) but never cybernated (a property of all composite systems), He does not possess what we understand as teleology. Nevertheless, in the *opera dei ad extra* He communicates a teleology that we can understand, as contingent, created beings. This He does through the two divine missions of God the Son and God the Spirit.

¹⁸⁸ Although we are working from divine missions and economic trinity “backwards” to eternal processions and ontological trinity, the whole divine work is “from eternity” (Muller, 2017:2).

Table 15 System design and *ousia*

System design (in divine missions)	<i>Ousia</i>
1. Continuity of identity 2. Preservation of “structure” amid changes 3. Constancy over time	One simple essence.
1. Goal-directedness 2. Teleology	One will and act.

4.3.3 *Ousia opera dei*

Since the divine *ousia* is not a system, He is not identifiable by ‘behaviour’. The *ousia* does not satisfy the three behavioural conditions of systems since He is not composite. Rather, Reformed Scholasticism understands God in terms of *opera*, or “works”¹⁸⁹. *Opera dei* refers to creation as well as its providential preservation (Muller, 2017:244). This comes in two sub-categories: *opera dei ad intra* and *opera dei ad extra*.

The divine *ousia* has inherent or natural authority over creation, Christ’s human nature and church. Within these systems He has embedded nested authorisation through two systems: the incarnate personal word and the spirated written word. The Father *hypóstasis* commissioned these to serve his purpose of Christoformity within creation. The *ousia ad intra* does not exhibit order (*taxis*), pattern, and purpose (final cause) as we would understand these within creation. The *ousia* is absolutely beyond these categories of thought. Instead, He is the source of order, pattern, and purpose within creation.

4.3.4.1 Divine *ousia* and system structure

The divine *ousia* is not cybernated and so He does not have interdependent parts. Being transcendent and immanent¹⁹⁰, He is not a part of an interdependent “divine-creation” system in any way and therefore He is independent while creation is dependent. The divine *ousia* requires absolute *dependence* from all creation, generally, church, especially and Christ’s human nature, maximally, while being ontologically independent of all creation and church.

¹⁸⁹ As Muller (2017:19) states: “operation follows existence (or essence)”.

¹⁹⁰ I would say that we use the cybernetics model for PERSONS: to summarise the divine missions and then the eternal processions, and then the Father. On the other hand we use the GST model for NATURE: to summarise what the God is NOT and what God must be, essentially. Since we are in space-time we will always have to pick one of these options to be the first, or perhaps use Skyttner whose model is a combination of both GST and cybernetics categories in one framework.

“The call to exclusive loyalty rests on the truth that there is only one God and that God himself is one” (Wells, 2012:9).

When it comes to structure the divine *ousia* does not have the three necessary properties. The three structural properties of all systems help us distinguish between an aggregate and a system. Since the divine *ousia* is uncreated, He is transcendent of all systems and aggregates.

4.3.4.2 Divine *ousia* and the GST systems thinking tradition

The systems thinking tradition of GST has always been present in theological reflection, since it is concerned with articulating and expounding on the nature of the triune God using *via negativa*. The divine *ousia* cannot be described or expounded in the major GST categories: openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation. In engineering a whole dogma of the triune God, we must reject these four categories – that are nevertheless true of both the incarnate and written word of God – as not applicable to the divine *ousia*, except *via negativa*.

4.3.4.2.1 The divine *ousia* is not open

The divine *ousia* is not an open system. We have stated that since the triune God is not composite, He is not an open system. He is absolute being and so is not relative or partial (Muller, 2017:2).

4.3.4.2.2 The divine *ousia* has no boundary

Although we are trained to think *ab intra* and *ab extra* categories (Muller, 2017:2), the divine *ousia* has no boundary. There is no defined perimeter around Him, in any sense: temporal, spatial, etc. Why reject that the divine *ousia* has a boundary? Without rejecting that He has a boundary, it is impossible to identify the boundary of creation, making them indistinguishable. He has no environment. The incarnation of the *Logos* by adding to Himself a human nature and the spiration of the written word of God are both understandable as open systems and therefore they are distinct in their own way from the simple divine *ousia*. Special revelation, whether in the personal word of God or in the written word of God is a divine-human interface necessary for interaction between the unbounded divine *ousia* and bounded humanity. Here we see the value of the divine missions of incarnation and sanctification which both provide common ground for communication between the divine *ousia* and humanity.

4.3.4.2.3 The divine *ousia* is not in a hierarchy/nestedness

The divine *ousia* is not a member of a supersystem or a subsystem. He is neither part-of-whole nor whole-with-parts. He has “life in Himself” (Muller, 2017:49).

Table 16 Hierarchy/nestedness of divine *ousia*

Supersystem	Not Applicable.
System	
Subsystems	

4.3.4.2.4 The divine *ousia* is not emergent/design pattern/downward causation

The divine *ousia* exhibits no ontological emergence from simpler components and does not change, develop, learn, or grow. Also, the divine *ousia* possesses essential aseity (self-existence) (Muller, 2017:41-42).

4.3.5 Divine *ousia* and Skyttner’s 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties that are not applicable to the divine *ousia*, we can focus on more detail. The divine *ousia* is not an open system cybernated by anything or anyone. Using Skyttner’s 10 irreducible properties of open systems, we can summarise them into 10 conceptual principles **not** applicable to the divine *ousia*.

4.3.5.1 Interrelated and interdependent parts

The divine *ousia* is not composed of ‘parts’. The *hypóstases* are not ‘parts’ composing his *ousia*. Although the *hypóstases* have eternal relations of origin (Barrett, 2021:320-321) and are “subsisting relations” we should not think of this relation as we know human relations to be – interbeing or perhaps, inter-*ousia*. God’s relations are intra-being or perhaps, intra-*ousia*. Likewise, we cannot use dependence as we understand it in any sense to describe the *ad intra* operations. Confessing that “God is one” is different to confessing that “church is one...”. The former confesses divine unity and simplicity, and the latter confesses composite unity-in-diversity. Vander Lugt and Galan (2012:3) note that the oneness of God is in two ways: 1. There is no other being like God; and 2. God is the only real God.

4.3.5.2 Holism

'Whole-and-parts' thinking¹⁹¹ is appropriate for composite objects, especially valuable for understanding open systems. Holism is the preferred approach to prioritising understanding the 'whole' before getting lost in the minutiae of the 'parts'. Although this 'big picture' attitude is epistemically beneficial when describing created systems, the divine *ousia* is beyond the total grasp of human knowledge and so we cannot gain a holistic understanding of Him. Since He is not composed of parts, we cannot even think of Him as a 'whole', but we must be satisfied with Him being **simple**. Divine simplicity is not in the category of 'whole-and-parts', it transcends it.

4.3.5.3 Teleological

The divine *ousia* is the maximally great Being and so He has no goal for his being. God is pure or perfect actualisation (Muller, 2017:11). He does not have any potentiality and He is therefore immutable.

4.3.5.4 Transformation

Since the divine *ousia* has no boundary, He has no environment. This means He is both transcendent and immanent and does not transform.

4.3.5.5 Inputs and outputs

Again, since the divine *ousia* has no boundary, He does not receive inputs or produce outputs in the way we would understand this to occur in creation (that is, the transformation of inputs). The divine *ousia* has no throughput.

4.3.5.6 Negentropic

So, the divine *ousia* uses means to bring negentropy to creation, communicating information brings order. The chief means are the incarnation of the *Logos hypóstasis* (which brings

¹⁹¹ I use this terminology to show that it is systems thinking categories and not strictly philosophical. Some theologians assert that one-and-many can be used with relation to the Trinity and I disagree since "Whole" and "Parts" are not appropriate to a Simple Being. For humans, I would surmise that most people when they use the term "Whole" are thinking in composite terms. On the other hand "One" can be either one in simplicity or one in composition, so I personally believe the terms and concepts are not strictly interchangeable.

knowledge), and the spiration of the written word of God. The mission of the *spiritus hypóstasis* is also relevant, being the second of the divine missions, bringing **love**.

4.3.5.7 Regulated (cybernated or controlled)

The divine *ousia* is not cybernated by anyone or anything. Therefore, He is not ‘internally regulated’ (which would imply He is lacking something and has some potential within his being).

4.3.5.8 Hierarchy/nestedness

As stated previously, the transcendent divine *ousia* is not an integrated system. Since He is not a system, He is likewise not a member of a supersystem or subsystem. He is not part-of-whole or whole-with-parts.

4.3.5.9 Differentiation

The divine *ousia* is not functionally differentiated in the way open systems are. We may think of the *hypóstases* of the Father, Son, and Holy Spirit with their personal properties as differentiated but this is not comparable to composite systems with functional differentiation within their whole. Howe said that it was important to maintain a degree of differentiation to sustain distinctions between the persons, but not in such a way as to “entrench upon the unity of the Godhead” (Bray, 2021:128). Although the Reformed tradition holds to both intra-communicable and intra non-communicable attributes, the being of God is one, and therefore cannot be differentiated as composite beings are. It seems like *ousia* has functional division and co-ordination of labour among the *hypóstases* in their processions and missions, but Reformed Scholasticism says: *Opera Trinitatis ad extra sunt indivisa* – the external works of God are undivided (Muller, 2017:246) and so there is only one will and one act present.

4.3.5.10 Equifinality and multifinality

The *ousia ad intra* is timeless and therefore there is no ‘finality’ appropriate to the divine *ousia* and his *operations*. *The divine ousia is not an integrated system.* From this *via negativa* overview of the divine *ousia* as *not* an open system, we conclude with an amendment of the threefold GST theme true of all cybernated open systems:

4.3.5.10.1 Independence

Absolute ontological independence is a property of the divine *ousia* alone, “He is completely independent of his creation” (Wells, 2012:9). The triune God is necessary and not contingent, He possesses pure aseity, which Bavinck (2004:152) labels “independence”¹⁹².

4.3.5.10.2 Unidirectional dependence

Absolute ontological dependence must be upon the divine *ousia* alone, “The universe was made by him, is providentially sustained by him, and is utterly dependent on him” (Wells, 2012:9).

4.3.5.10.3 Interdependence

Since the divine *ousia* is one and simple, ideas of ‘interdependence’ internal to his being and in relation to creation, church and Christ’s human nature are all likewise inappropriate. Since the triune God is simple it means He is wholly independent. This means He is not dependent on anything or anyone. It also means all creation is dependent on the triune God for existence. ‘Interdependence’ is a situation possible to two beings who are mutually dependent (that is, provide for each other in a beneficial way, and not co-dependent) and mutually interrelated.

4.4 *Hypostases as cybernetic*

Since the term **cybernetics** is derived from the Greek noun, *kubernetes*, which means “to pilot or rudder”, divine cybernetics serves by conceptualising and modelling the dogma of the triune God in the positive (Muller, 2017:391) way which is the way of eminence (*via eminentiae*¹⁹³). To properly understand how the dogma of the triune God serves the authoritative divine direction system within church (that is, special revelation of the word of God), we must first understand how the dogma of the triune God is cybernetic. Thereafter we will investigate how the dogma of the triune God has properties of an open system. Divine cybernetics is concerned with information, feedback, and control. All *opera dei ad extra*, including production of the written word of God is cybernetic:

¹⁹² Although He is totally independent (that is, not dependent on anything), the triune God wills to relate to creation.

¹⁹³ This is the way of eminence. It is a method of identifying positive attributes of the triune God by raising attributes of creation to an infinite level (Muller, 2017:391).

4.4.1 Information: Divine communication

Special revelation concerning the nature and persons of the triune God is communicated through the written word of God¹⁹⁴.

4.4.1.1 Special revelation¹⁹⁵

Special revelation, distilled into the dogma of the triune God¹⁹⁶, is used by church to direct it towards the pre-set goal of ultimate Christoformity: liberation, sanctification, and glorification¹⁹⁷. The dogma of the triune God acts to maintain and restore stability in creation, church, and Christ's human nature.

The dogma of the triune God, in service to Him, is essentially concerned with the transmission and interpretation of **special revelation** regarding the nature and persons of the triune God, in propositional form.

We must believe in one God who, in his being, is not confused with creation and who is tripersonal – Father, Son, and Holy Spirit.... this truth... came slowly. God did not disclose it all at once. There were intimations of it from the very beginning of his self-revelation, but it did not come into full bloom from our perspective until the incarnation and the resurrection.

Special revelation of the word of God is distilled into the dogma of the triune God proposition which is then absorbed and confessed by the church to direct her towards a preset goal: Christoformity.

4.4.1.2 Special revelation as information

The dogma of the triune God clearly communicates truth about what we should believe about the nature and persons of God: the right opinions to hold to. It is also clearly communicating spirituality about what we should value, the right orientation of our hearts towards the triune

¹⁹⁴ Belcher (2016:18-20) contrasts the role of the Old Testament prophet in bringing the word of God to the congregation (Deut. 18:18) with the forbidden practice of divination which likewise sought information from a divine source.

¹⁹⁵ It is also always understood as the history of revelation (Muller, 2017:149) in space-time to creation.

¹⁹⁶ The idea here is that the Biblical Theology provides the summary of the main teaching of Special Revelation, and then that is assembled into a concise form called Creeds. From the Creeds, we have Dogmatic Theology. So, again, I think we are dealing with a process of communication of revealed truth which must first be exegeted, then assembled into a Biblical Theology, and then summarised in creeds, and then assembled into Dogmatic Theology form.

¹⁹⁷ This blessed eternal state (52) will take a form of *aphtharsia* – incorruptibility (34) – and *athanasia* – immortality (34) after resurrection.

God. Lastly, it clearly communicates existential and practical issues about how we should live, the right practices of life with and for the triune God. The dogma of the triune God infers design since it is information from an intelligent source. As a servant of the word of God, it exhibits the properties of information albeit in propositional form: contingency, complexity, and specification.

4.4.1.3 Contingency, complexity, and specification

The special revelation truth found in the dogma of the triune God proposition was not the result of an automatic (unintelligent) process. Rather, it was produced in history by the triune God and the church under his direction. The special revelation truth found in the dogma of the triune God proposition regarding the nature and persons of God is too complex to have been produced by chance. The special revelation is information, and this information is complex, it is not something that is inferred from nature which would be general revelation. Rather, the data is a complex proposition (one God that is three persons). This is a mystery or paradox which cannot be simply inferred by the mind (even the most logical philosopher of antiquity did not propose this or anything like this) or observation of nature (which is only inference and not information per se) alone. The special revelation truth found in the dogma of the triune God proposition regarding the nature and persons of God withstands scrutiny since it was clearly the product of intelligence which exhibits patterns¹⁹⁸.

4.4.2 Feedback: Divine-human communion

Mutual indwelling of the triune God and creation¹⁹⁹, church, and Christ's human nature are taught in, experienced through, inferred from, and required to produce the written word of God. "Eternal generation grounds regeneration" (Sanders, 2017:269). Barth's trinitarian doctrine enables the believer to have what is called the "I-Thou" dialogue between the "sons of God" and the triune God, which is an extension to fallen humanity in the *imago dei* of the personal relationship between the Father and the Son (Bray, 2014:1163). As he summarises: "without the Trinity it would not be possible, since our communication with God proceeds in and through his self-revelation to us and is not the projection of our own thoughts onto a hidden and unknown deity."

¹⁹⁸ An outline or pattern is called *hypotyposis* (Muller, 2017:155).

¹⁹⁹ The mutual indwelling of the persons in the triune God, in the natures of the hypostatic union, and within Christians is strictly *perichoretic*. The "mutual indwelling" of the triune God with the whole of creation is the subject of immanence.

4.4.2.1 Mutual indwelling

Church, as a divine closed-loop system, is regulated by dogmatic feedback and dogmatic feedforward mechanisms found in the dogma of the triune God. Dogmatic feedback is a strategy that allows church to adjust to unexpected worldview disturbances. It is based on actual rather than expected performance of church. It is actuated by propositional errors (that is, deception) in church and it corrects a deteriorating church bringing life and renewal.

4.4.2.2 Feedforward

Dogmatic feedforward is anticipatory which means it produces a divinely predicted and divinely desired state in the future of the Church. The living system (church) is adjusted to a future state which does not yet exist. Dogmatic feedforward occurs before an event occurs. The triune God prepares church for future possible outcomes. The way He prepares church is by providing propositional information about church's expected behaviour (that is, orthodoxy, orthokardia, and orthopraxy). From there He simulates the actual processes. For this reason, dogmatic feedforward is divinely goal-directed or teleological for church. The divine goal is built into the church models which transform special revelation about predicted futures (prophecy: foretelling) into changes in the state of the present system (prophecy: forthtelling).

4.4.2.3 Negative feedback

Negative dogmatic feedback in church restores the church's theological worldview to orthodoxy by correcting sinful deviations regarding the nature and persons of the triune God to re-align with the predetermined goal of Christoformity. If the Church does not have negative dogmatic feedback her theological worldview stability disappears. In other words, without negative dogmatic feedback the church becomes unstable in her theological worldview. The way this instability manifests is that the boundaries between the church's Christian theological worldview in propositional form and its relevant environment (the world of competing theological worldviews in propositions) start to disappear. Once they completely disappear the church's Christian theism worldview will cease to exist. Negative dogmatic feedback opposes the worldview propositions a diverging church is producing. The more negative divine feedback there is will thus result in less heterodox output as the church's Christian theological worldview in propositional form is corrected and stabilised. The dogma of the triune God will provide negative dogmatic feedback in propositional form to assist us when our 'head', 'heart', and 'hands' are producing heterodoxy, 'heterokardia', and 'heteropraxy'. It will correct the 'head' when it is not believing truth and believing lies. It will redirect us from heterodoxy to orthodoxy. It will correct the 'heart' when it is not valuing proper spirituality and valuing things

of the flesh. It will redirect us from 'heterokardia' to 'orthokardia'. It will correct the 'hands' when they are not behaving properly. It will redirect us from 'heteropraxy' to orthopraxy.

4.4.2.4 Positive Feedback

Positive dogmatic feedback is temporary and results in a 'runaway' effect. Before the process explodes and destroys the whole church the self-accelerating loop is usually halted. An example of this in the New Testament is when Paul hands over people to learn not to blaspheme (1 Tim. 1:20). This is also what we see occurring in Romans 1 where Paul explains that the wrath of the triune God is evident against human unrighteousness and human suppression ("holding down", like drowning) the truth inferred regarding God's divine attributes - power and deity (20) in creation (18) which is clear to everyone (19) and thus they knew him but did not glorify Him, were not thankful toward Him, and this resulted in their hearts become darkened (21). This resulted in idolatry and worshipping creation instead of creator (23 & 25) and sexual sin (24, 26-27) and a runaway effect of rampant and escalating sinful activity everywhere (27-32).

4.4.3 Control: Lordship or divine shepherding

Benevolent control of creation, church, and Christ's human nature is explained and enacted through the written word of God. The dogma of the triune God is a summary of these for us to perceive and understand the *opera dei ad extra* in a created context, familiar to us. Using divine cybernetics with a focus on the triune God in creation will result in conceptualisation of the rich interaction of the uncreated creator and creation: divine-human goals, predictions, actions, and response.

4.4.3.1 Lordship or divine shepherding

Lordship or divine shepherding in the dogma of the triune God can be defined as, "the divine goal-directed influence toward a predetermined divine end of the orthodox Christian theological worldview in propositional form with a continuous comparison of the current state of the church's theological worldview to the future goal of Christoformity (liberation, sanctification, and glorification)". In other words, the dogma of the triune God is divine shepherding or God's benevolent guiding influence upon, and control, of the Church's theological worldview. Part of the process of Christoformity (liberation, sanctification, and glorification) is an increasingly orthodox theological worldview, in propositional form.

4.4.3.2 Liberation, sanctification, and glorification

The dogma of the triune God is divinely goal-directed as it makes sure that the church is conformed to the truth of, spirituality towards, and practical activity with and for the triune God. It influences what church believes about, values and how it lives in relation to the triune God. It has the purpose of propositionally establishing right opinions regarding, hearts oriented toward, and lives submitted under, the triune God. The means of this liberation, sanctification, and glorification is edification which comes by the written word of God communicated in propositional form through the dogma of the triune God. The dogma of the triune God is a theological worldview propositions control system for church. The primary purpose of divine shepherding through the dogma of the triune God is to influence the Church's theological worldview in propositional form as a programmatic 'guide'. Divine shepherding the theological worldview of church is not inherent. It is the goal-directed divine influence upon church's Christian theological worldview, in propositional form. Worldview theological shepherding is: distillation into Creeds, dissemination of creeds, and confession of creeds²⁰⁰.

4.4.3.3 Programming

A divine theological worldview propositional program is defined as, "The coded or prearranged theological worldview proposition²⁰¹ that controls the process of church liberation, sanctification, and glorification, leading it toward the given end of real redemption"²⁰² or *lytrosis* (Muller, 2017:206). All of this depends on initial and continual engrafting into Christ – "standing in Him" and "being in Him" by mystical union (173). The teleonomic process of Christoformity (liberation, sanctification, and glorification) is guided by a creedal program: church's theological worldview, in propositional form. Therefore, theological worldview adaptation and development requires propositional reprogramming. The reprogramming is by means of divine shepherding through the influence of the dogma of the triune God on the Christian theological worldview, in propositional form.

Table 17 Cybernetics and *hypóstases ad extra*

Cybernetics	<i>Hypóstases ad extra</i>
1. Information	Special revelation
2. Feedback	Mutual indwelling
3. Control	Lordship or divine shepherding

²⁰⁰ We should highlight Karl Barth's emphasis that whatever cannot be preached cannot be taught or confessed (Bray, 2014:1164).

²⁰¹ That is, the creeds.

²⁰² This is the final and real redemption distinguished from forensic justification in Rom. 1:17 (Muller, 2017:140).

4.4.4 Measures of performance: Effectiveness, efficiency, and efficacy

Since the dogma of the triune God is cybernetic, it measures the performance of creation, Christ's human nature, and church. He regulates creation, Christ's human nature, and church by using the following three measures of performance: effectiveness, efficiency, and efficacy. All of these are measuring glory.

Effectiveness measures the extent of the transformation of creation, Christ's human nature and church into alignment with the dogma of the triune God. Through the dogma of the triune God, the triune God guarantees creation, Christ's human nature, and church are maximally effective glorifiers by accomplishing orthodoxy, orthokardia, and orthopraxy. Efficiency measures this transformation versus the cost. Efficacy measures the success of the transformation to glorify the higher-level system which is the ascended word of God. The word of God measures these performances of creation, Christ's human nature, and church by being the cybernetic influence serving the glorification of the Triune God.

Table 18 Measures of performance and the dogma of triune God

Measures of performance	Dogma of the triune God
1. Effectiveness	Liberating truth about uncreated creator (that is, one being and three persons).
2. Efficiency	Low-cost ²⁰³ truth about uncreated creator.
3. Efficacy	Glorifying truth about uncreated creator.

4.4.5 General control problems: Being, behaving, and becoming

Since the dogma of the triune God is cybernetic, it solves control problems in creation, Christ's human nature, and the church. As an embedded control, the dogma of the triune God serves God, assisting in solving three problems: existence, obedience, and transformation. All these outcomes are understood in terms of glory.

The dogma of the triune God helps birth and maintain the orderly internal theological structure of creation, Christ's human nature and church, by resisting the disorder from deceit and heresy in the form of competing worldview theological propositions. It forms and nurtures truth, spirituality, and glorifying practices in creation, Christ's human nature, and church. Through

²⁰³ Available in summarised, creedal form.

the dogma of the triune God, the triune God guarantees creation, Christ's human nature, and church are glorifying Him.

The dogma of the triune God serves Him in completing the goal of theological formation, in propositional form, despite the surrounding milieu of competing worldview propositions. It solves the problems of wrong opinions, wrong-heartedness, and wrong life practices. Through the dogma of the triune God, He guarantees creation, Christ's human nature and church glorify Him through obedience. The dogma of the triune God helps transform creation, Christ's human nature, and church, by removing divergent goals and preserving convergent ones. Divergent goals are those that are not in alignment with the will of God whereas convergent goals are. Through the dogma of the triune God, He guarantees creation²⁰⁴, Christ's human nature and church increase in glorification. It changes the church's 'head', 'heart', and 'hands' by removing lies, incorrect spirituality and wrong practices while simultaneously preserving good opinions, heart-orientations, and life practices. The dogma of the triune God solves all three of these problems by being the servant of the word of God.

Table 19 General control problems and dogma of the triune God

General control problems	Dogma of the triune God
1. Being	Births knowledge about uncreated creator.
2. Behaving	Regulates knowledge about uncreated creator.
3. Becoming	Transforms knowledge about uncreated creator.

4.5 Divine missions: *Opera dei ad extra* and eminent cybernetics

Now that we have outlined how the dogma of the triune God can be structured in the cybernetics system thinking tradition, we can populate the cybernetics framework with theological data concerning the persons of the triune God. To understand the triune God as the creative nature (Muller, 2017:227) we benefit by using the cybernetics systems thinking framework. Cybernetics is a distinct category of systems thinking focused on information, feedback, and control. Whereas the dogma of the triune God is a system of terms concerning his nature and persons, the triune God himself, being three distinct persons sharing one simple being, transcends cybernetic systems. The systems thinking tradition of cybernetics is present in theological reflection, since it is concerned with articulating and expounding on the two

²⁰⁴ Creation will undergo *apokatastasis panton* – the restoration of all things, fulfilling all prophecies found in the written word of God (Muller, 2017:34).

divine missions of the triune God using *via eminentiae*²⁰⁵. The two divine missions can be described or expounded eminently in the major cybernetics categories: information, feedback, and control.

The economic trinity, being the *opera dei ad extra*, is fundamentally the divine missions that are accomplished by the Son *hypóstasis* and the Spirit *hypóstasis*. These two divine missions can be outlined with divine cybernetic categories and provide a relative knowledge of the triune God (Muller, 2017:310). An important term here is *akataleptos*, which is defined as: ‘something that cannot be contained or fathomed; used by the fathers as a term for denoting the immeasurability and incomprehensibility of God, God’s utter transcendence, and the absolute mystery of the Son’s generation and the Spirit’s procession’ (20). Once this is done, we have a model, understandable to humans by analogy which helps us to outline the eternal ontological trinity.

Since the term cybernetics is derived from the Greek noun, *kubernetes*²⁰⁶, which is not by definition strictly composite (as GST is), divine cybernetics helps by conceptualising and modelling the *hypóstases ad extra* cataphatically, the positive way (Muller, 2017:391) which is the way of eminence (*via eminentiae*). This is grounded on the *analogia entis* (25) which finds likeness between the finite and infinite. In this case, we use the model of the cybernetic system (how it exhibits communication, feedback, and control) as an analogy for the *opera dei ad extra*, especially the divine missions of the *Logos ensarkos* and *spiritus*. Using divine cybernetics, the dogma of the triune God can be described or expounded in these three major cybernetics categories. When adapted to the triune God, divine cybernetics is concerned with special revelation, mutual indwelling, and divine shepherding.

We will investigate the cybernetics categories of information, feedback, and control as they pertain to the two divine missions of the Son and the Spirit. Thereafter we will outline the two eternal processions of the Son and Spirit. Lastly, we will summarise the ontological trinity (the Cybernator) based on what has been revealed cybernetically by the divine missions and eternal processions.

²⁰⁵ Thus, this is comparable to *a posteriori* (1), from effect of divine missions to cause of eternal processions.

²⁰⁶ It is also the source of the word *gubernation* which means “governance” or “rule”, especially in divine providence (145).

4.5.1 *Hypóstases*

The *hypóstases ad intra*, the transcendent triune God, are not cybernetic. They are *actus purus*²⁰⁷ or absolute act (Muller, 2017:8). Natural theology infers a divine being who is pure actuality. The *hypóstases* have no passive potency which is what would need to be activated and fulfilled to reach potential and perfection²⁰⁸. Instead, the triune God is pure actuality, judging performance in creation, Christ's human nature and church.

Within the *hypóstases ad intra* these categories are actualised and never in a state of potentiality (Muller, 2017:336). Since the *hypóstases ad intra* have no body (Vander Lugt & Galan, 2012:13) and thus are *only* spirit (John 4:24) this guarantees them being cybernating creation²⁰⁹, Christ's human nature, and church. Nevertheless, the single divine nature of the Father *hypóstasis* is communicated to the *Logos* and to the *spiritus hypóstasis* in the eternal processions. By these eternal relations of origin, the Father *hypóstasis* eternally communicates divine Being to the Son and the Spirit. To understand the *hypóstases* clearly, we are benefitted by the helpful distinctive categories within Reformed Scholasticism. The *opera dei ad intra*, is taught by and inferred from the *hypóstases ad extra*. From this we can infer the eternal processions of the Son and Spirit and the eternal personal properties: the unbegottenness of the Father, the eternal begottenness of the Son and the eternal spiration of the Holy Spirit.

4.5.2 God is three *hypóstases ad extra*

We have shown that the triune God is three *hypóstases ad extra*, we outlined how He is comparable to a cybernetic system. Cybernetics is applicable to God because He reveals himself within creation in a cybernetic way, via the “two hands” of the Son and the Spirit²¹⁰. Bray (2014:1190) notes that each of the persons of the triune God have their own identity that

²⁰⁷ The triune God is pure or perfect actualisation or actuality and has no potential (11).

²⁰⁸ The triune God is the most perfect being (107).

²⁰⁹ It is possible that human beings, in the *imago dei*, are *sub-cybernators* due to being spirit and body, conforming to the substantive view (Erickson, 2015:187-188) while also conforming to the functional view by being given the task of lordship or dominion (Muller, 2017:97). In the incarnation, Likewise, Jesus Christ took the form of a servant (135) which was the most complete revelation of the character of the *Logos* (and thus the trinity) and the modelled goal of all humanity. As he was servant, so should we be. As He was serving the cybernator as ultimate sub-cybernator, we should expect the same goal for our own lives. Therefore, we advocate *imitatio Christi* (160).

²¹⁰ Sanders is quoting a church father who wanted to communicate the Father is the unbegotten Person, that the Son Person is eternally begotten, and the Spirit Person is eternally spirated, both being “sent” by the Father (and the Spirit through the Son). In this way the image seems to evoke the idea that the Son and the Spirit have their divine missions into creation in order to manifest deity and act within our world in order to reveal themselves and the Father. The Father himself, does not have a procession or mission, but through the others He manifest and acts within creation to accomplish the single will of God.

is not interchangeable: “the Father did not become a man and die on the cross, because he could not do so: the inner logic of his personal identity made that not merely inappropriate but impossible. The same is true of the Holy Spirit.”

4.5.3 God is three *hypóstases ad intra*

To understand the three *hypóstases ad intra* of the triune God, we must outline how He is eternally cybernator. To do this, we must show first how the *hypóstases operate* within eternity, particularly through the eternal relations of origin. This provides an inferred outline of the triune God *ad intra* cataphatically, as a transcendent and eminent cybernator without being a cybernetic system. Thereafter, we can conclude how the triune God is ontologically within his own being, analogical to cybernetic, in eternity, and without any reference to creation.

4.5.4 *Hypóstases* and *ousia*

The *hypóstases*, sharing one *ousia*, are not composite, they are simplicitas²¹¹ (Muller, 2017:336) or uncompounded actuality (12). Since the *hypóstases* have no body (Vander Lugt & Galan, 2012:13) and are spirit (John 4:24) this guarantees them being cybernator of creation²¹². Nevertheless, their single will is communicated into creation through the divine mission of the incarnate personal word of God (*Logos ensarkos*). Invisibly, the divine mission is knowledge. Likewise, through the divine mission of sanctification (*spiritus hypóstasis*), the triune God's single will, and act is also communicated within creation. Invisibly, the divine mission is love. The written word of God articulates these divine missions as special revelation in words, understandable to the reader and hearer. By authoritative divine direction the *hypóstases* and the Scripture (served by the creeds) cybernetically direct creation, Christ's human nature, and church.

4.5.5 God is one simple *ousia* and three distinct *hypóstases*

We have shown that the triune God is one *ousia*, we outlined how He is not a system. GST is not applicable to God because He is one, simple substance. To understand the three *hypóstases* of the triune God, we must outline how He is cybernator. To do this, we must show first how the *hypóstases operates* within creation, through the twofold economy of the *Logos ensarkos* and the *spiritus hypóstasis*. This provides an outline of the triune God *ad extra* cataphatically, as an immanent and eminent cybernator – without being a composite system.

²¹¹ *Deus ab omni compositione vera et reali liber est.*

²¹² It is possible that human beings, in the *imago dei*, are *sub-cybernators* due to being spirit and body, conforming to the substantive view (Erickson, 2015:187-188).

Thus, we can perceive how the triune God is economically cybernetic in creation. To understand the *hypóstases ad extra* clearly, we must use the helpful categories from Reformed Scholasticism. The *opera dei ad extra* is where we can learn about the *hypóstases* of the *Logos ensarkos* and the *spiritus* from their missions in history. This understanding helps us understand and infer the three eternal *hypóstases* (Father, Son, and Holy Spirit) which are revealed in the written word of God.

4.5.6 *Opera dei*

Opera dei refers to creation as well as its providential preservation (Muller, 2017:244) or conservation and preservation (77). This comes in two sub-categories: *opera dei ad extra* and *opera dei ad intra*. Since the *hypóstases ad extra* is like a cybernetic system, they are identifiable by 'behaviour' which Reformed Scholasticism understands in terms of *opera dei ad extra*, or "works". The triune God's action or activity within creation is through divine missions in history. These divine missions occurred in history and thus are kinetic (Muller, 2017:190) which appear to us as cybernetic activity of the triune God.

Opera dei ad extra refers to the outward or external works or activity of God. God's *ad extra* works are creation, sustenance of creation, and relation to creation²¹³ (Muller, 2017:244) and these are ideas understandable using divine cybernetics with special reference to the two divine missions. When the triune God acts externally it is comparable to a cybernetic system. It will involve understandable concepts like communication of information, feedback cycles, and control. Theologically these are in the *Logos ensarkos*: special revelation, mutual indwelling, and shepherding. The second person of the trinity, God the Son, is the perfect image of God the Father. When He is in his office, He is both revealer and revelation (Muller, 2017:205). In other words, in the divine mission of the Son, through incarnation, we can receive revelation about the nature and persons of God, his mutual indwelling (hypostatically as well as in the Godhead), and the single divine shepherding or Lordship of creation. By the incarnation, we are made aware of the existence and characteristics of the triune cybernator. In the incarnation of the *Logos* we perceived anthromorphic (human form) and anthropathic (human feelings, affections, and passions) qualities within Jesus Christ, which helps us understand the triune God in human terms (31). *Opera dei* are only observable to humans within creation when *ad extra*. Without them, we would only know about God from general revelation and natural theology which is incomplete and suppressible (Rom. 1:18).

²¹³ The doctrine of *double gratuity* is that the triune God has exhibited a double grace in creation and redemption (Sanders, 2017:71).

The triune God is active in creation²¹⁴, in general, and church, specially, and in Christ's human nature, maximally, so He has works observable by humans. Contrary to his contemporaries, Barth saw the immanent or ontological trinity as real (Letham, 2019:343). Dörner perceived the triune God as immutable "in his self-understanding and in his ethical principles" but can and does change in his relationship to sinful and mutable human beings (Bray, 2021:45-46). Bray summarises it like this: "No one has ever questioned the fact that God acts in different ways toward human beings according to the behavior of the latter or for some other reason connected with them, and all classical theologians have agreed that he does not thereby change in himself (46)."

The *opera dei ad extra* are the two divine missions and they result in sanctification, liberation and glorification in creation, Christ's human nature, and church. The *opera dei ad extra* (the invisible divine missions of knowledge and love), operate within creation, with maximal effectiveness, efficiency, and efficacy, solving problems to maintain the being, behaving, and becoming of creation, Christ's human nature, and church. The eternal processions of the *hypóstases* of the Son and of the Spirit are responsible for these works as they manifest in creation.

In this context, divine cybernetics is concerned with how the *hypóstases* inform, regulate and control creation, Christ's human nature, and church by means of special revelation, mutual indwelling, and divine shepherding or Lordship. The triune God's absolute authority serves creation, Christ's human nature, and church in these three cybernetic sub-categories. He is also immense or "beyond the world" which means that although God does not occupy space, He is present in the world without being confined by it (Muller, 2017:117). **Immensity** then, is God in eternity while **omnipresence** is God within creation (161).

4.5.7 *Hypóstases* and the two divine missions

The *hypóstases ad extra* are cybernetic and so by the two divine missions they function like a cybernetic system in creation, *par excellence*. Being immanent, the Son and Spirit are the "two hands" of the Father *hypóstasis* in creation, each with a divine mission. Sanders (2017:151) thus describes the one economy of God as being twofold. The image used in history is that

²¹⁴ Although the triune God is completely independent from creation, He relates to creation through means. He does this not due to any lack on his own part, but by his love for creation. We perceive this relation through the two divine missions of the Son in incarnation and the Spirit at Pentecost. The independence or aseity of the triune God is that He requires nothing and no-one to complete his being. In contrast all creation depends on the triune God for continual being and has a variety of system relationships within creation (various forms of independence, dependence (and co-dependence) and interdependence).

the *hypóstases* of the Son and the Spirit are each a “hand” through which the Father acts within creation. The *hypóstases ad extra* are the source and subject of special revelation, divinely revealed information within creation. Effective communication to creation, Christ’s human nature and church must be within a concrete system. This is the justification for the two visible divine missions and the spiration of the written word of God.

Through the visible and invisible divine mission of incarnation the triune God communicates in and through the concrete system of the enfleshed Jesus Christ, providing knowledge. Through the visible and invisible divine mission of the Spirit the triune God communicates in and through the indwelling Holy Spirit, providing love. Through spiration the triune God communicates in and through the concrete system of the words of the Bible. Thus, the triune God, particularly in the two divine missions, permits himself to be circumscriptive, capable of being described by physical description (Muller, 2017:64).

In the divine mission of the Son - incarnation and everything accomplished therein, from virgin birth to ascension - we have a model which is described in 1 John 1, “That which was from the beginning, which we have heard, which we have seen with our eyes, which we have looked upon, and our hands have handled, concerning the Word of Life” (NKJV). Similarly, in the divine mission of the Spirit - at Pentecost - we again have a historical event in creation with witnesses, as described by Luke in Acts 2:1-39, beginning with a sound from heaven like a rushing wind (2), tongues of fire distributed and resting on each person (3), and speaking in tongues (4). As Letham (2019:500) says: “The Father sent the Son, the, following the Son’s death and resurrection, he sent the Spirit of his Son”.

4.5.8 Hypostatic missions

Hypostatic missions refer to one *hypóstasis* “sending” another *hypóstasis* in creation to accomplish God’s undivided work of salvation²¹⁵. The Father *hypóstasis* sends the *Logos hypóstasis* to become the *Logos ensarkos*, to redeem us and to become our Lord (that is, our divine shepherd or cybernator). The Father and the *Logos hypóstases* send the *spiritus hypóstasis* to indwell, enliven and sanctify us, actualising salvation, and Lordship (cybernation), within us. Rahner held that only through the economic trinity do we have access to or have any understanding of the immanent trinity (Bray, 2014:1190).

The two divine missions refer to the *Logos hypóstasis* and the *spiritus hypóstasis* being sent into creation. Each *hypóstasis*’s mission reflects each *hypóstasis*’s eternal relation of origin.

²¹⁵ Salvation can be understood as *apolytroxis* or “ransom of a captive” (Muller, 2017:35).

In the divine missions of the economic Trinity, the eternal relations of origin are extended to creatures in time. Not everything in the two divine missions should be projected back into the immanent Trinity (Barrett, 2021:322). For example, the suffering and submission of *Logos ensarkos* (in time and space) does not mean that the *Logos asarkos* (in eternity) suffers or is eternally functionally subordinate to the Father *hypóstasis*.

The Father *hypóstasis* who eternally begets the *Logos hypóstasis* sends his incarnate Son into creation in order that we might become sons (that is, aligned sub-cybernators) of the cybernator. The Father and the *Logos hypóstases* who eternally breathe out the *spiritus hypóstasis* send the Holy Spirit into creation in order that we might be sanctified (that is, spiritually cybernated) for fellowship (or, *koinonia*) with the triune God (Swain, 2020:135) and with others. Calvin believed the energy of the Holy Spirit was known by Christians due to the “hypostatic relationship which the Holy Spirit establishes with believers by dwelling in them” (Bray, 2014:714).

The *hypóstasis* of the Son was actively cybernetic, as Jesus Christ also taught, spoke, gave utterance, bore witness, convicted, led, and prayed. The *hypóstasis* of the Holy Spirit was actively cybernetic: as Wells (2012:22) lists his activities all of which have a cybernetic flavour: teaching, speaking, giving utterance, bearing witness, convicting, leading, and praying. These are fundamentally directional for divine cybernetic control of creation, Christ’s human nature and church. These two *hypóstases* work together. The *hypóstasis* of the Spirit actively accomplished salvation by causing Jesus’s conception (incarnation which is special revelation). He is also the medium of Jesus’s offering to the Father. The Spirit anoints Jesus as Christ and so equips the Son to do the work of redemption.

The *hypóstasis* of the Son, likewise, accomplishes redemption by being the ascended word of God, and with the Father, sending the *hypóstasis* of the Holy Spirit into creation. Through the *hypóstasis* of the Spirit, the *hypóstasis* of the Son lives in the hearts of Christians. Therefore, the *hypóstasis* of the Son actively applies redemption but also acts in equipping the *hypóstasis* of the Spirit to do the application. While both are involved, each takes turns leading.

The *hypóstasis* of the Holy Spirit was involved at the three most important points in the *Logos ensarkos/prophorikos*: incarnation, atonement, and resurrection (Wells, 2012:22). He acted cybernetically to overshadow Mary (Luke 1:35), to lead and sustain Jesus against the attacks of Satan and to bring Him to accomplish self-substitution on the cross (Heb. 9:14) and effected Christ’s resurrection (Rom. 1:3-4) which was a divine public communication of the completion of the work and defeat of spiritual enemies (23). Using the divine cybernetics framework, we

will first summarise the *opera dei ad extra* of the person and work at the *Logos hypóstasis* and then the person and work of the *spiritus hypóstasis*. Thereafter we will be equipped to infer truth regarding the personal properties of the immanent trinity.

4.5.9 The two divine missions are cybernetic

The three *hypóstases ad extra* have a single will and act (*opera trinitatis ad extra sunt indivisa*). Since the triune God is one *ousia*, all three *hypóstases* act together in all of God's works, whether eternal or within the economy. Although every *hypóstasis* in the triune God is of the same essence, the divine missions of the *Logos hypóstasis* and the *spiritus hypóstasis* are distinct. Nevertheless, the doctrine of appropriations (Muller, 2017:244) helps us perceive this as the works of the triune God ascribed to the individual *hypóstases* within creation. Each divine mission is particularly attributable (that is, appropriated) to one *hypóstasis* in creation. Only the *Logos hypóstasis* was *ensarkos* and only the *spiritus hypóstasis* spirated at Pentecost. But this does not exclude the other two *hypóstases*. All three *hypóstases* were involved in these acts (Letham, 2019:578). There is a continuous inflowing or influence of God on creatures (Muller, 2017:79) and so He is not the "idle God", contra Epicureanism (91).

Since the ontological trinity exists outside of time, He does not *operate* cybernetically as we understand it within creation: in information, feedback, and control. Nevertheless, the triune God operated visibly in the divine missions (the Son at incarnation and the Spirit at Pentecost), so divine cybernetics can be applied to the immanent Trinity. Bray, summarising Rahner, says, "What God has done in history tells us who he is in eternity, and beyond that we can know nothing about him" (2014:1190). The two divine missions are divine cybernetic works. Each one uniquely presents information, feedback, and control. From these two divine missions we can glean the three persons of the economic trinity as He operates in creation, Christ's human nature, and church. From the economic trinity we learn about and infer the eternal processions, which complete our understanding of the eternal ontological trinity.

4.5.9.1 Information

Both the divine missions are cybernetic: They communicate information. The *Logos* was communicated within creation through the incarnation (*ensarkos*²¹⁶/*prophorikos*²¹⁷). The Holy Spirit is also the communication of divine revelation through Pentecost. Both divine missions resulted in the canon of the written word of God. Emery described the two divine missions as

²¹⁶ The word incarnate, the word enfleshed (Muller, 2017:205).

²¹⁷ The word brought forth (205).

royal “embassies” in creation that “convey the treasures of God’s eternal kingdom” (Swain, 2020:115).

Although every *hypóstasis* in the triune God is of the same essence²¹⁸, the two divine missions of the *Logos* and the Spirit can be distinguished. The divine missions communicate truth within the creation and are in concordance. Having already outlined the GST and divine cybernetics frameworks as they apply to the written word of God, we will now focus on the divine mission of the personal, incarnate word of God, the *Logos ensarkos/prophorikos*.

4.5.9.1.1 Incarnation: Information in the divine mission of the Son

The divine mission of the Son is described as the *Logos ensarkos/prophorikos*. The incarnation of Jesus Christ is the first of the two divine missions in creation. In this mission the triune God is revealing himself through communication as cybernator²¹⁹. Barth saw the incarnate personal word of God - in whom the fullness of the triune God dwelt in a human nature - as the core of the self-revelation of the triune God (Bray, 2021:137). He saw the word of God dynamically: a subject seeking to control and act upon the Church. This incarnate personal word of God is “God speaking to” humanity, as testified in the written word of God (Lane, 2006:274).

Once Jesus Christ was incarnate, human beings were enabled to perceive and understand the person and work²²⁰ of the Son. Jesus Christ also taught about the persons of the Father and the Spirit, and He was attended by them in different ways. The Gospel provided information, communication, and special revelation to humanity of the visible divine mission of the Son. With the incarnation of Jesus Christ, the subject of Christology²²¹ is started and that would naturally lead to the subject of theology proper: the trinity became a clearly delineated subject too. The first advent of Christ (2 Tim. 1:10) are known as an epiphany (Muller, 2017:109) as is his final advent (1 Tim. 6:14) at the eschaton (109). As information is the measure of order in an open system, the incarnation, the *Logos ensarkos/prophorikos*, is the divine means of bringing order in creation, Christ’s human nature, and church²²². Through incarnation we were given a divine-human person who had the threefold office of prophet,

²¹⁸ *Homoousios*.

²¹⁹ God as cybernator means He is the sole, sovereign, authoritatively directing agent in creation. Just as there is only one agent and not three, there is likewise only one cybernator, not three.

²²⁰ His theandric activities which are the common works of both natures (Muller, 2017:7).

²²¹ Christology is the teaching related to the person (and work) of Christ (Letham, 2019:578).

²²² The “disorder” in Christ’s human nature is not sin, it is the weakness and limits of humanity that He shared with us, adding a contingent nature which, by definition, relies on the necessary being for perpetual existence.

priest, and king. Calvin saw this threefold office as the divine self-revelation in time and space (Bray, 2014:541).

Some of the main communicable attributes of the triune God modelled by Jesus Christ for our benefit were love, holiness, mercy, and faithfulness (Vander Lugt & Galan, 2012:7). Since they are communicable it means these attributes are true of both his natures – divine and human. The triune God can relate interpersonally, and he does so. He is neither aloof nor disinterested in his creation, Christ's human nature, and church. He is aware of, and concerned about, the details of our lives and can sympathize with the struggles we face in a fallen world (15). The *Logos ensarkos/prophorikos*, in his three advents²²³ is clear communication of God the Son Himself within creation, through divine-human natures in the single hypostatic union: the person of Jesus Christ. This is the actuality of union of two natures, the “personal union”, or better: the actualisation of the person of Christ (Muller, 2017:12)²²⁴. “Apart from the incarnation, there is no accurate, complete, true, and dependable representation of the being and character of God” (Wells, 2012:8). As Sanders (2017:99) says,

the Trinity is a revealed doctrine, and it was revealed when Jesus and the Holy Spirit showed up. It was the sending of the Son on the mission of incarnation and atonement that gave us the starting point for discerning his eternal sonship and revealed the proper meaning of the fatherhood of God the Father. We followed a parallel line for the Holy Spirit, from his sending at Pentecost back into his eternal procession from the Father.

In this way, the data about the triune God communicated through the person and work of the *Logos ensarkos/prophorikos* is ‘processed’ by creation, Christ's human nature, and church. Humbly accepting the data will re-direct a person toward the pre-set goal of glory. Through the *Logos ensarkos/prophorikos*, the divine cybernator restores and maintains stability in creation, Christ's human nature, and church.

The word of God can be considered in his revelatory work before incarnation or after incarnation (Muller, 2017:169) and so the revelatory work of the word of God in the Old Testament foreshadows the incarnation. To infer special revelation through the incarnate personal word of God requires identifying divinely revealed information in the incarnation and bringing forth of Jesus Christ. The incarnation, ministry, and work of Christ as well as his

²²³ That is, in the flesh, in grace, and in glory (Muller, 2017:166).

²²⁴ The actuality of the humanity or human nature of Jesus Christ must precede logically but not temporally the actuality of person (13).

appearance in a state of humiliation was the advent of Christ in the flesh. During this time his power was only visible in weakness and his divinity was only revealed in miracles and the transfiguration (Muller, 2017:16-17). Dembski's properties of information that infer intelligent design in creation can be helpful to infer divine design in *Logos ensarkos/prophorikos*. Since all information is negentropic, the *Logos ensarkos/prophorikos* likewise has three attributes: contingency, complexity, and specification.

4.5.9.1.2 Incarnation: Contingency, complexity, and specification

The *Logos ensarkos/prophorikos* was not the result of an automatic (that is, unintelligent) process. Such a being would have no choice in his incarnation/being brought forth. Instead, the incarnation was a “common work” of the Godhead (Muller, 2017:169). The word of God does not incarnate apart from the will of the Father and the Spirit. The *Logos ensarkos/prophorikos* is not so simple that He could be produced by chance. Here we appeal to Scripture which teaches that when the time was right Jesus came, which shows divine timing²²⁵. The *Logos ensarkos/prophorikos* has a pattern which is the product of divine intelligence. Jesus Christ fulfilled the Old Testament prophecies, completing the types as final antitype²²⁶. The Old Testament events “cry out for their divinely ordained fulfilment in the new covenant, where God completes his intention to make himself known” (Sanders, 2017:135).

In the *Logos ensarkos/prophorikos*, information concerning the *ousia* and *hypóstases* of the triune God can be transformed into “noise” (Jesus was crucified) but not the other way around (the incarnation and the bringing forth of Jesus Christ to clearly communicate special revelation about the triune God was not a ‘happy accident’ or coincidence). *Logos ensarkos/prophorikos* (the enfleshment or bringing forth of the person of Jesus Christ) was ‘reversed’ through the crucifixion when it seemed all was lost.

4.5.9.1.3 Pentecost: Information in the divine mission of the Spirit

The mission or sending forth of the Holy Spirit at Pentecost, which is distinct from the eternal procession, is the Holy Spirit's activity of the *opera dei* essentialia (which is how the Father and Son act within creation, both generally as well as particularly in salvation (Muller, 2017:221)). The divine mission of the Spirit is cybernetic: He communicates information. The Spirit is being communicated within creation through sanctifying spiration (and He spirates the written word of God). Bray (2014:714) notes that Calvin sees the Holy Spirit as “remaking” us

²²⁵ Galatians 4:4.

²²⁶ See Jesus Christ as antitype in 1 Cor. 15:22 & John 3:14-15.

into the likeness of the incarnate personal word of God - the Son. This is the invisible divine mission of the Spirit which is love. Sanctification is the second of the two divine missions in creation, led by the Holy Spirit. Through the teaching and actions of the *Logos ensarkos/prophorikos* we also learn about the person and work of the Spirit. Understanding the Spirit is simply understanding the triune God as sanctifying cybernator. It is understood by the term *hagiasmos* which means holiness (Rom. 6:19-22) and sanctification (1 Cor. 1:30).

The Holy Spirit sanctifies the church by applying the redemption accomplished by the Son. He too is communicative and informational, using the written word of God as the means of communicating to the church²²⁷. The Holy Spirit provides the baptism of the breath or the wind by pouring out the special gifts of the Spirit on the church (Muller, 2017:51). Sanctification is when Christian's experience what is called daily conversion whereby human beings co-operate with the triune God for continual illumination and regeneration.

4.5.9.2 Feedback

Both the divine missions are cybernetic: they exhibit feedback cycles. The *Logos* exhibits feedback cycles in the incarnation (*ensarkos/prophorikos*) and the Spirit exhibits feedback cycles in sanctification. Together they established feedback cycles within the written word of God.

4.5.9.2.1 Incarnation: Feedback in the divine mission of the Son

The divine mission of the *Logos ensarkos* regulated Christ's human nature by divine feedback (prophecy: forthtelling) and divine feedforward (prophecy: foretelling). The hypostatic union²²⁸ connects the divine cybernetics concept of *Logos ensarkos/prophorikos* and the divine cybernetics concept of Lordship or divine shepherding. Gifford (2022:115) summarises orthodox Christology as a defence against monophysitism, monoenergism, and monothelitism. From the Gospel we can infer dyothelitism within the person of Jesus Christ: "Father, if you are willing, take this cup away from me. Yet not my will but yours be done" (Luke 22:42).

²²⁷ The sword of the spirit is the word of God (Eph. 6:17).

²²⁸ *Krasis* which means 'composition' or 'union'.

The hypostatic union²²⁹ allowed the one person Jesus Christ (who has two natures²³⁰, two energies²³¹, and two wills²³² – human and divine) to adjust to unexpected environmental disturbances within creation as theanthropos, the God-man²³³. Although the triune God is indivisible and has no dimension (Muller, 2017:94), in the incarnation²³⁴ He had a **dichotomy** (92) of divine and human natures and in the single person was a bilateral pair of natures (94). The human nature of Jesus had the highest possible knowledge of God or theology when in hypostatic union (52) as well as being self-taught (48) because of the indwelling *Logos* and the habitual grace from the Holy Spirit (143). The *Logos* communicated grace to Jesus Christ's human nature in the incarnation, known as the grace of eminence (69). This is also called the grace of union (145). The natures of Jesus Christ are distinct as *aliud et aliud* – one thing and another – and not *alius et alius* – one person and another²³⁵.

Being in the unique hypostatic union resulted in actual rather than expected obedience. The two natures were in unhindered *koinonia* (communication, communion, and community) with each other. It was actuated when natural, sinless divergence in Christ's human nature²³⁶ is converged by perfect divine influence to conform to the will of the Father. Within the one person Jesus Christ the hypostatic union is actuated by the relation between the two natures of Jesus Christ that align the human nature's performance to the influence of the divine will. The natures are “without division and without separation” (Muller, 2017:5 & 14)²³⁷ and “without change and without confusion” (43)²³⁸. Salvation is reconciliation with the triune God (Rom. 5:11)²³⁹. This reconciliation is made possible by the redemption accomplished by the incarnate word of God, who has both divine and human natures united in the one person.

The potential of “deteriorating performance” addressed by divine cybernetic influence is the natural divergence of even the sinless human will of Jesus Christ (wanting to continue a life of loving serving and sacrificial ministry as his desired means for glorifying the Father) from the divine will (requiring his sacrifice and end of his earthly sacrificial ministry, as the means for glorifying the Father), which Jesus Christ experienced in the Garden of Gethsemane. The

²²⁹ Also known as the *henosis hypostatike* (Muller, 2017:148).

²³⁰ *Dyophysitism*.

²³¹ *Dyoenergism*.

²³² *Dyothelitism* means Jesus Christ has two wills – human and divine.

²³³ We worship the divine nature of Jesus Christ, not the human (193).

²³⁴ *Ensarkosis* (108).

²³⁵ Sometimes this is rendered “*allos kai allos*” distinct persons (in the Trinity) and “*allo kai allo*” for the distinct natures (in the incarnate Jesus Christ) (20-21).

²³⁶ The human nature of Jesus Christ is impersonal or “non-self-subsistence” (27).

²³⁷ This is a defence against Nestorianism, which saw too much distinction between Christ's two natures.

²³⁸ This is a defence against Eutychianism, which confused Christ's two natures, by infusing the divine attributes into the human nature (75).

²³⁹ Also known as *katallage* (190).

triune God regulates creation, Christ's human nature, and church by the feedback and feedforward cycles which are established in the divine mission of the Son. The *Logos ensarkos/prophorikos*, having both a divine nature and a sinless human nature, perfectly submitted to the will of God the Father. He was, and is, regulated by divine feedback and divine feedforward, unimpeded by sin and death. This provides an ideal model or archetype (Muller, 2017:38) of human submission to the will of the Father. In our case, we require the indwelling Holy Spirit to sanctify us.

Jesus Christ, as Son of God, is *homoousios* with the Father. After Chalcedon this term also indicates the fullness of Christ's humanity. On the other hand, as Son of Mary, he is *homoousios* with all human beings. So, Jesus Christ has consubstantiality and coessentiality with God and humans (Muller, 2017:153). *Enhypóstasis* means 'impersonality' and is usually applied to the human nature of Christ with identification of the person – the eternal word. The purpose of this term is to protect the union of the two natures through affirming the oneness of Jesus Christ's person, which is divine and not the sum of the divine and human natures (107). In the hypostatic union the concept of communication of properties explains the way the properties of each of his two natures are communicated to or interchanged in the unity of the person (70-71). Similarly, the communication of operations in the hypostatic union explains the common work of Christ's two natures, each doing what is proper to it, according to its attributes (71).

4.5.9.2.2 Hypostatic union and divine feedback

Negative Divine Feedback

Negative divine feedback restored Christ's sinless human will to alignment with the divine will (the predetermined divine goal of glory) by establishing stable equilibrium in Christ's human nature. This can be understood as *koinonia* or unhindered communication, communion, and community with the Godhead. If Christ's human nature did not have negative divine feedback his stable *koinonia* with the triune God would disappear. In other words, without negative divine feedback, Christ's human nature would have become unstable. The way instability would have manifested is that the sanctified boundary/environee of Christ's human nature would have started to disappear. If the boundary/environee had completely disappeared, Christ's human nature would be out of fellowship with the divine Godhead – resulting in sin and death.

Ensarkos, the human nature of the *Logos* was a recipient of the influence of negative divine feedback. In his case, the 'deviation' was not sinful but the natural divergence that a sinless

human (the will to continue to live a life of loving service and sacrifice to glorify God) would have from the triune God's will (the will for atoning sacrifice to accomplish redemption). Negative divine feedback opposed what Christ's human nature was doing. The increase in negative divine feedback resulted in less output from Christ's human nature as it was aligned with the divine will (in other words, submission leading to a God-glorifying sacrifice). Another term for this is discipline (Heb. 12:6) and in the unique case of Jesus Christ this was "divine judgement" – his atoning crucifixion.

When the human and divine wills of Jesus Christ were tempted towards divergence, there was a hypothetical risk of instability.²⁴⁰ However, these remained in concordance as Jesus Christ submitted his sinless human will to the will of God the Father. Had He not submitted to the crucifixion and continued living, He would have been in sin. God the Father's will was the crucifixion, and to do anything but faithfully submit to the will of the Father would have been sin. Once again, to remain orthodox we must emphasise that unlike discipline that comes upon the church²⁴¹, the unique discipline that came upon the Son was not in response to sin within Him, but to accomplish redemption. Jesus Christ submitted his sinless human will to God the Father's will and underwent the resultant discipline (John 10:17-18).

Positive Divine Feedback

Positive divine feedback is temporary and results in a 'runaway' effect. Before the process explodes and destroys Christ's human nature, the self-accelerating loop is mercifully halted by the triune God. Positive divine feedback is dangerous and is 'unstable equilibrium'. Since Jesus Christ's human nature was sinless, this situation was impossible and therefore only hypothetical. However, the crucifixion event was ambiguous to the onlookers. Some people perceived divine judgement as if Jesus Christ deserved it (Luke 23:39), whereas others a sinless man atoning for the sins of humanity (Luke 23:40). To the former group of onlookers, Jesus Christ was being subjected to positive divine feedback, that is, divine judgement.

Divine Feedforward

Divine feedforward is pre-emptive which means the Godhead produced a divinely predicted, divinely desired future state in Christ's human nature: resurrection and glorification. Jesus Christ's human nature was adjusted to a future state which did not yet exist before his

²⁴⁰ "The Protestant orthodox, both Lutheran and Reformed, insist that Christ was not only sinless but also incapable of sinning because of the *unio personalis*, or personal union, of the human nature of Christ with the Word" (Muller, 2017:25).

²⁴¹ These are known as paternal castigations which are limited, temporal punishments on Christians by God the Father which draws us away from sin and eternal punishment (55). They are also known as *paideia* (253) which carries more of an idea of teaching, instruction, discipline, and correction.

resurrection – incarnate glory (Luke 9:28-36). This occurred before the resurrection, preparing Christ's human nature for possible future outcomes. The way the Godhead prepared Christ's human nature was by providing divinely revealed information about his expected behaviour (Heb. 12:2). From there, the Godhead simulated the actual processes to accomplish the atonement (Luke 9:51). For this reason, divine feedforward is goal-directed or teleological. The goal was: glory²⁴², and this was built into Jesus Christ's human nature which transformed divinely revealed information or special revelation about the divinely predicted future (Old Testament prophecies: foretelling) into changes in the present state of Christ's human nature (New Testament fulfilment).

4.5.9.2.3 Pentecost: Feedback in the divine mission of the Spirit

The divine mission of the Spirit exhibits feedback cycles in two ways: the sanctifying indwelling initially evidenced by the speaking of tongues, and then, through the canon of the written word of God. The Holy Spirit's divine mission of sanctification in creation, Christ's human nature, and church, included the idea of **feedback**. The Holy Spirit sanctifies the church by indwelling us. When He indwells the church, he is providing an internal indwelling divine influential presence which establishes a feedback system inside humans.

As our ideal model, the incarnate Jesus Christ, had a sinless feedback system internal to himself, the Holy Spirit. We are now equipped in the same way by the indwelling of the Holy Spirit. In the case of Jesus Christ his human nature was sinless and therefore in perfect *koinonia* with the Holy Spirit whereas with our own sinful natures the *koinonia* is flawed and being restored over time. Since Jesus Christ has the threefold office perfectly, He had the divine-human feedback with only the limits of sinless humanity.

4.5.9.3 Control

The two divine missions are cybernetic: they establish control. The *Logos ensarkos/prophorikos* establishes control through incarnation and the Spirit establishes control in two ways: sanctifying indwelling. Together they use Scripture (the written word of God) to accomplish their goals. ‘

4.5.9.3.1 Incarnation and sanctification: Control in the divine missions of the Son and Spirit

Divine cybernetics is particularly concerned with a particular resultant state of the *opera dei ad extra* – Lordship or divine shepherding”. The primary purpose of divine shepherding is to

²⁴² John 17:1-5.

benevolently influence. Divine shepherding is not inherent in creation, Christ's human nature, and church. Rather, it is the goal-directed influence upon creation, Christ's human nature, and church by the triune God through the divine missions of the *Logos* and Spirit, using primarily the written word of God as their means. In other words, first through the incarnation and then through sanctification by indwelling, the triune God establishes benevolent control or Lordship or divine shepherding in the church community. The *Logos* and the Holy Spirit communicate this through the written word of God. In time, as a process, Lordship or divine shepherding is *koinonia*.

4.5.9.3.2 *Koinonia* as communication, communion, and community

Word (*Logos*)²⁴³ and Spirit processing. This means that people need to hear about the two visible divine missions in words²⁴⁴ or human communication. The written word of God was provided as a record for this purpose.

Divine programming through teaching. The *Logos* and the Spirit continue their ministry through the church, by the written word of God, served by the creeds. This is most clear in the assembly or congregation of the elect or faithful or called or saints or body of Christ (Muller, 2017:65-66, 72, 75, 82) or more generally a pious gathering (68). Christians enjoy the "consolation of the brethren" whereby the gathered believers have the consolation and support of Jesus Christ's presence (78).

Koinonia involves divine decision. The triune God passes over the church in communion or brings judgement²⁴⁵. This is most clear in the Lord's supper/the holy supper (Muller, 2017:65) whereby in the partaking of the blood and the bread Christians have communion with or 'join with' Jesus Christ (68). Calvin saw that the deep meaning of the Gospel was most fully revealed and experienced in it (Bray, 2014:878). The partaking of the communion of the body and the communion of the blood is having communion or fellowship with Christ. The act points towards the communication of the body and blood of Jesus Christ (Muller, 2017:71-72).

Mutual indwelling is active reciprocal²⁴⁶ communication, communion, and community between God-creation, God-Christ's human nature, and God-church. A divine program is coded or prearranged *Logos* that controls a process or behaviour of creation, Christ's human nature, and Church, leading them toward the given end of glory. Divine teleonomic processes are

²⁴³ This includes hearing and understanding about the incarnation, as well as absorbing the word from the Bible.

²⁴⁴ Romans 10:14, 17; Luke 8:11.

²⁴⁵ 1 Cor. 11:29-32.

²⁴⁶ See "abiding" in John 15.

always guided by a divine program. Adaptation and development of creation, Christ's human nature, and church²⁴⁷ demand reprogramming. This is sanctification. Sanctification is the divine mission of the Holy Spirit (Muller, 2017:245-246). Since the church is always needing to be reformed (102), it always needs the cybernetic influence of the Son and the Spirit to remain in *koinonia*, both within itself and with the triune God.

The threefold office would be the means of divine shepherding in divine-human person. Calvin specified that prophecy would ultimately be fulfilled, priestly sacrifices made obsolete by heaven, but the kingly rule would continue in a translated form as “the manifestation on earth of the eternal sovereignty of God” (2014:541).²⁴⁸

Bray (584) summarises Calvin's sentiment on the lordship of the ascended Jesus Christ as encompassing all creation and establishing the Christian in eternal indivisible union with the triune God. Calvin believed that union with Christ was sealed by the indwelling presence of the Holy Spirit in the heart of the Christian (920). Union with Christ is the core of Christian soteriology (Sanders, 207:178). So, in summary, Lordship or divine shepherding is established through the divine missions of incarnation and sanctification. These are the two missions of the *Logos* and the Spirit, respectively. Therefore, divine control in creation is achieved and maintained by the 'two hands' who are the single agent: the cybernator, the triune God.

Table 20 Cybernetics and divine missions

Cybernetics	Divine missions	
	Visible	Invisible
1. Information	Special revelation through incarnation and Pentecost.	Knowledge and love communicated.
2. Feedback	Hypostatic union Son and indwelling Spirit.	Knowledge and love in communion.
3. Control	Lordship or divine shepherding by Son and/through Spirit.	The knowledge and love community.

²⁴⁷ The incarnate Jesus Christ was sinless and therefore perfectly obedient. This sinlessness or impeccability is “inherent and not due to regeneration and sanctification” (Muller, 2017:25).

²⁴⁸ It is possible that the *munus triplex* aligns with the cybernation of all systems: information = prophetic word brings revelation; feedback = priestly *koinonia* brings reconciliation; and control = kingly shepherding brings rule and reign. This could explain why all working systems are cybernated, as a material metaphor or natural analogy for how the Creator cybernates (truly, well, and beautifully) everything in creation (albeit through secondary causes), manifesting order, pattern, and purpose that is transcendental (true, good, and beautiful).

4.5.10 Divine cybernetics: Measures of performance

The triune God, by means of the divine missions, is perpetually measuring these three, responding to diverging performance, and adjusting creation, Christ's human nature, and church to maintain stability. Divine cybernetics uses the following three measures of performance of creation, Christ's human nature, and church: effectiveness, efficiency, and efficacy.

The *Logos* and the Spirit measure the extent of creation, Christ's human nature, and the church's transformation into glory. They measure the extent of creation, Christ's human nature, and the church's transformation into glory versus the cost in resources. They measure the extent of creation, Christ's human nature, and church's contribution to the triune God's glory. They measure these performances by the invisible missions of the Son (knowledge) and Spirit (love).

Table 21 Measures of performance and invisible divine missions

Measures of performance	Invisible divine missions
1. Effectiveness	Together knowledge and love transform creation.
2. Efficiency	Together knowledge and love transform creation at low-cost.
3. Efficacy	Together knowledge and love transform creation to the glory of God.

4.5.11 Divine cybernetics: General control problems

The triune God, by means of the divine missions, is resolving these three, responding to challenges, and directing creation, Christ's human nature, and church accordingly to maintain them, for the glory²⁴⁹ of the triune God. Divine cybernetics resolves these three general control problems: being, behaving, and becoming.

The *Logos* and the Spirit maintain the internal structure of creation, Christ's human nature, and church by resisting entropy. They complete the divine goal of glory regardless of changing conditions challenging creation, Christ's human nature, and church. They remove divergent goals and preserving convergent ones in creation, Christ's human nature, and church. All of this is accomplished through the invisible missions of the Son (knowledge) and Spirit (love).

²⁴⁹ That is, the glory and majesty of God, his infinite eminence (Muller, 2017:140).

Table 22 General control problems and invisible divine missions

General control problems	Invisible divine missions
1. Being	Together knowledge and love create all being.
2. Behaving	Together knowledge and love regulate all created being.
3. Becoming	Together knowledge and love glorify all created being.

4.5.12 Opera dei ad extra is cybernetic

From this *via eminentiae* overview of the *hypóstases* as comparable to a cybernetic system, we conclude with the threefold GST goal true of all cybernetic systems:

4.5.12.1 Independence

Establishing absolute ontological independence²⁵⁰ while eliminating independence of creation, Christ's human nature, and church, is the dual goal of the *hypóstases ad extra*. What this means is that the persons seek to reveal the aseity or independence of the transcendent triune God to complete the creator-creature distinction in the mind of the church. This necessarily requires also making creation, Christ's human nature, and church actively dependent on the triune God. While all creation is naturally dependent on the triune God without will, the special creations (the *imago dei* of Adam and Eve, Jesus Christ, and church) must actively submit their wills to the triune God. Adam and Eve failed in this while Jesus Christ, being sinless and unable to sin, did not, and the church increasingly trusts in the triune God, through daily sanctification (this is why we are exhorted to abide in the vine, Jesus Christ).

4.5.12.2 Unidirectional dependence

Establishing absolute ontological dependence upon the triune God alone while eliminating unidirectional dependence within creation, Christ's human nature, and church, is the dual goal of the *hypóstases ad extra*.

4.5.12.3 Interdependence

Establishing interdependence within creation, Christ's human nature, and church is the goal of the *hypóstases ad extra*.

²⁵⁰ Independence as a divine attribute is a corollary of all-sufficiency and self-existence of God (171).

4.6 Eternal processions: *Opera dei ad intra* and analogical cybernetics

Now that we have outlined how the *hypóstases ad extra* can be understood as comparable to a cybernetic system, we can discuss how the *hypóstases ad intra* are transcendent to this. Using the cybernetic systems thinking tradition, we can populate the *hypóstases ad intra* cybernetics framework with theological data concerning the persons of the ontological triune God. Calvin agreed with the Cappadocians that the persons are distinguished from one another by incommunicable properties (Bray, 2014:712). Whereas the *hypóstases ad extra* is comparable to a cybernetic system, the triune God himself, as three distinct persons, sharing one simple being outside time and space, transcends the cybernetic system analogy. They are eternal and always have been (Sanders, 2017:160): “The living God is the Trinity: God the Father standing in these two eternal relationships to the Son and the Spirit” (161).

Since the term cybernetics is derived from the Greek noun, *kubernetes*, which is not necessarily composite, divine cybernetics serves God’s will by conceptualising and modelling the *hypóstases ad intra* cataphatically, the positive way (Muller, 2017:391) which is the way of eminence (*via eminentiae*). This is grounded on the *analogia entis* (25) which finds likeness between the finite and infinite. In this case, we use the model of the cybernetic system in *hypóstases ad extra* as an analogy for the *hypóstases ad intra*. As Sanders (2017:75) says,

Pondering the eternal, essential Trinity is the most concrete and biblical way of acknowledging the distinction between who God is and what he does. God is eternally Trinity, because triunity belongs to his very nature. Things like creation and redemption are things God does, and he would still be God if he had not done them. But Trinity is who God is, and without being the Trinity, he would not be God. God minus creation would still be God, but God minus Father, Son, and Holy Spirit would not be God. So when we praise God for being our creator and redeemer, we are praising him for what he does.

Opera dei ad intra refers to the inward or internal works or activity of God. God’s *ad intra* works are either essential or personal (Muller, 2017:245). This is the ontological trinity²⁵¹. God’s *ad intra* works are eternal and immutable. Bavinck states that the triune God’s immutability is applicable to time (since He is eternal), location (since He is omnipresent), and his essence (since He is pure being) (Jones, 2017:59). The inward works of the triune God are immanent and therefore are either essential immanent works before going out or personal immanent

²⁵¹ The triune God in Himself, or the three *hypóstases* as they relate to one another without reference to creation (Letham, 2019:582).

works of themselves (Muller, 2017:244). The former can be outlined using GST negatively. The latter can be outlined by first using cybernetics eminently and then inferring the divine processions, analogically.

Divine cybernetics is not directly applicable to *opera dei ad intra* since it still involves ideas of information, feedback cycles, and control which are principles restricted to the creation. Rather, it must restrict itself to the *opera dei ad extra*, the divine missions of the two *hypóstases* within creation: the Son and the Spirit. For this reason, divine cybernetics is what can be gleaned of the *hypóstases* of the triune God from visible *opera dei ad extra* – within creation. These provide everything revealed and knowable about the persons of the triune God, in creation.

4.6.1 Eternal processions of hypóstases

God is *autotheos*²⁵² – ‘God by nature’ – and this applies to each person of the trinity, particularly to the Son and Spirit so that they are considered divine by nature and not by grace (Muller, 2017:49). The *opera dei ad intra*, including the eternal processions of the Son and the Spirit, being beyond creation (i.e., eternal), transcends effectiveness, efficiency, and efficacy as well as the general problems within creation of being²⁵³, behaving, and becoming²⁵⁴. We know of the personal properties of the *hypóstases ad intra* through the *opera dei ad extra*. The visible divine missions of the Son and the Spirit reveal the two invisible eternal processions of begottenness (filiation) and spiration. Since the Father does not have any eternal relations of origin, the two divine missions and the two eternal processions of the Son and the Spirit reasonably infer the unbegotten Father.

4.6.1.1 Essential *ad intra* works

These are the common works performed by the Godhead in its oneness. They are also known as common works and include the eternal decree and its execution in time. Although the three persons work as one, there is a manner of working, corresponding with the interpersonal relations of the Father, Son, and Holy Spirit. The Father acts or works through the Son and in the Spirit. The Father is the source or activity who works of himself and from none. The Son

²⁵² It should be mentioned that Calvin’s opponents understood his Christology to be *autotheos* - that divine essence was in each triune person “natively” (Van Dixhoorn, 2017:186).

²⁵³ God as “being” does not mean the same thing as creatures having being (Bray, 2021:115). The triune God is beyond being and so He is beyond the general problems being solved by cybernetic systems.

²⁵⁴ We thus agree with classical theism contra process theology (Lane, 2006:293).

is the means of action, who works not of himself but from the Father. The Spirit is the limit of activity who works not of himself but from both the Father and the Son.

The essential *ad intra* works are further sub-divided into: 1. The eternal decree or will willed by the entire Godhead as the foundation of all *ad extra* works, and 2. the execution or enactment of the divine decree, both in the general work of creation and providence (the economy or arrangement of salvation). Because of the close connection between the essential *ad intra* works and essential *ad extra* works they are sometimes understood as immanent works preceding external act and outgoing acts or works.

4.6.1.2 Personal *ad intra* works

These are the works distinct to each *hypóstasis*. *Ad extra* works are always one, the personal works occur only *ad intra*. These are restricted to the activity of the Father begetting the Son, the activity of the Father and the Son spirating the Spirit, and the Spirit to the Father and Son as passively spirated. They are also called divided operations because they identify and distinguish the *hypóstases*. This contrasts with *ad extra* works which are indivisible. These are also called immanent works in and of themselves because they do not issue from the Godhead. This is different from the essential *ad intra* works which ground all work, *ad extra*. Since the *ad extra* works concern the divine missions of the Son and Spirit in creation, the work of the Godhead *ad extra* can be understood as a common work terminating on individual *hypóstases*: the Son in incarnation and Spirit in Pentecost.

How the triune God acts internally it is inferred from the *ad extra* acts. It will involve eternal relations of origin comparable to the main principles of cybernetic systems: communication of information, feedback cycles and control. Theologically, *ad intra*, these refer to: processions, mutual indwelling, and Lordship. The ontological trinity is transcendent from creation, Christ's human nature, and church, so his internal works are not observable by humans. The *opera dei ad intra* is this set of works present in eternity and operate apart from creation. Since He is transcendent, He is not measurable in terms of effectiveness, efficiency, and efficacy. Likewise, with reference to Himself, He is not solving the general problems to maintain being, behaviour and becoming. The eternal processions of the *hypóstases* of the Son and of the Spirit from the Father are the total works. In this context, divine cybernetics is concerned with how the *hypóstases* proceed, mutual indwell one another, and are Lord. The triune God's absolute authority serves creation in operates in these three cybernetic sub-categories.

4.6.2 *Hypóstases* design: Order, pattern, and purpose

The two eternal processions of the Son *hypóstasis* and Spirit *hypóstasis* are eternal and therefore are not understandable in creation concepts of constancy over time or goal-directedness. Only after the eternal processions continue into creation as the divine missions then order, pattern, and purpose within the Godhead become understandable to us within creation. The *hypóstases ad intra* are not understandable in these categories of thought. From *opera dei ad extra* we can infer eternal order, pattern, and purpose within the ontological Trinity.

4.6.2.1 *Ordo theologiae/taxis* or the relations of origin

The *ordo theologiae* is the irreversible order disclosed by the relation among the *hypóstases*. In eternity, the Father *hypóstasis* begets the *Logos hypóstasis* and with the *Logos hypóstasis* spirates the *spiritus hypóstasis*. Order does not require hierarchy/nestedness or subordination of any kind in the immanent Trinity, nor anything temporal. It simply means the Father is to be considered 'first', Son "second", and Spirit 'third'.

From the *hypóstases ad extra* we discover and infer the necessary, eternal, and unchanging relations of persons, or 'ordering', between the Father, *Logos*, and *spiritus hypóstases* in eternity. The Father *hypóstasis* has paternity in relation to the *Logos hypóstasis*. He is the one who initiates and sends. Calvin writes of a clear order in the persons, the Father is the source (Letham, 2019:465): "As the Father is the source of the hypostatic relations *ad intra*, so he is the foundation and source of all the works of God" (473, italics in original). The *Logos hypóstasis* is distinguished from the Father *hypóstasis* since he is eternally from the Father *hypóstasis*. The *spiritus hypóstasis* is neither the Father *hypóstasis* nor the Son *hypóstasis* since he eternally proceeds from the Father and the *Logos hypóstases*.

4.6.2.2 Pattern

The *opera dei ad intra* is the source of the visible patterns we perceive in the *opera dei ad extra*. Each of the two divine missions visibly communicate divine persons. *Opera dei ad intra* executes the missions of *opera dei ad extra*. From the economic *hypóstases ad extra* we learn about the ontological. Because that which distinguishes the *hypóstases* of the trinity is each *hypóstasis*'s relation of origin. It is the way in which each *hypóstasis* is eternally related to another as his personal principle or source. The Father *hypóstasis* is the eternal principle or source of the *Logos hypóstasis* through begetting the *Logos*. The Father *hypóstasis* and the *Logos hypóstasis* are the eternal personal principle or source of the *spiritus hypóstasis* through

breathing the *spiritus hypóstasis*. These and nothing else distinguish one *hypóstasis* from another *hypóstasis* of the triune God.

4.6.2.3 Purpose

Purpose is the reason something exists and that is how to measure its functional success. The *opera dei ad intra* execute the visible and invisible divine missions for the purpose of the final cause of Christoformity: liberation, sanctification, and glorification.

Table 23 System design and *hypóstases ad intra*

System design (in eternal processions)	<i>Hypóstases ad intra</i>
1. Order of operation.	1. Fons. 2. Medium. 3. Terminus.
2. Pattern of personal relation.	1. Unbegottenness. 2. Eternal generation. 3. Eternal procession.
3. Divine purpose	Glory.

4.6.3 *Opera dei ad intra* and cybernetics

As we noted, cybernetics is a distinct category of systems thinking focused on information, feedback, and control. Using divine cybernetics, the *hypóstases ad intra* cannot be described or expounded in these three major cybernetics categories. When adapted to the ontological trinity, analogical divine cybernetics is concerned with communication, coinherence, and Lordship. Since these were completely revealed to all creation in the visible divine missions of *hypóstases ad extra* (that is, the economic trinity), we can infer them analogically of the ontological trinity, which is ultimately transcendent of human understanding and frameworks.

4.6.3.1 Communication

There are two eternal *processions*²⁵⁵: the eternal begetting of the *Logos* and the eternal procession of the Spirit. These are aligned to, taught by, and inferred by the divine missions,

²⁵⁵ Processions have two uses: (1) the term broadly refers to eternal relations of origin ; (2) the term narrowly refers to the Spirit's origin: the eternal relation of the Spirit to the Father (and to the *Logos*, in Western Christianity) (Barrett, 2021:323). I have used the former definition and for the latter definition I have chosen spiration.

the sending of the *Logos prophorikos* and the Holy Spirit in history²⁵⁶. We have stated that the two divine missions of the triune God within creation are cybernetic. The eternal processions are like the divine missions but do not communicate information. This means that in eternity the triune God is inherently communicative but without the transfer of information. Dwelling in eternity excludes incarnation or spiration. When it comes to the eternal processions coming from the Father *hypóstasis* to the Son and Spirit *hypóstases* it is the divine being that is communicated.

4.6.3.1.1 Communication: Eternal generation²⁵⁷ of the Son

“Barth challenged Christians to speak of the mystery of eternal generation in every available way” (Soulen, 2017:146). To infer the personal property of filiation or *nativitas* (Muller, 2017:123) or *gennesia* (139) – which is sonship or begottenness or generation of the *Logos asarkos/endiathetos* – requires observing the perceivable model of the life and teachings of the visible divine mission of the *Logos ensarkos/prophorikos*. Generation or genesis is not voluntary but natural and necessary (Muller, 2017:18). It is active as the Father eternally generates the Son, and passive as the Son is eternally generated by the Father. It is also eternal and perpetual and “hyperphysical” which means of a totally different order to physical generation of human beings (Muller, 2017:154). It is entirely internal to the triune God’s being.

***Logos asarkos*²⁵⁸ and *endiathetos*²⁵⁹**

Only through the visible divine mission of the incarnation of Jesus Christ in Creation (including his hypostatic person, divine and human natures, and *ad extra* work) can we discover eternal begottenness from the Father. This infers and clarifies that the Father is eternally begetting the *Logos*. The term for this is *adiastasia* which is continuity or “absence of separation” which describes “the inseparable relation of the Father and the Son and the continuous generation of the Son from the Father” (Muller, 2017:15). As the *Logos ensarkos*, by being begotten, is the first of two of the divine means of organising creation, Christ’s human nature, and church, we have already acknowledged the *Logos asarkos/endiathetos* as having this same personal property from the Father, eternally. Wells (2012:13) notes that the incarnation communicated what had been true for all eternity, “God is one in being but also tripersonal”. Similarly, by

²⁵⁶ Eastern Christianity considers it an error to call the Father *hypóstasis*’s begetting of the *Logos hypóstasis* a procession. For the East, this is Western Christianity confusion of the Father and the *Logos*.

²⁵⁷ Although eternal generation of the Son has been critiqued since the late nineteenth and early twentieth centuries, it had been, up to that point, well established since Augustine (Emerson, 2017:56).

²⁵⁸ The second person of the trinity pre-incarnation (Muller, 2017:205).

²⁵⁹ The second person of the trinity as eternally immanent (205).

perceiving Hambrick's 16 attributes of the holiness of the triune God (2012:14) in the *Logos ensarkos/prophorikos*, we can learn and trust that the *Logos asarkos/endiathetos* has the same 16 attributes too. For example, Jesus Christ, manifesting love, was personal and so He related to individuals. Therefore, the *Logos asarkos/endiathetos* is personal²⁶⁰.

The *Logos asarkos/endiathetos*, since He is God the Son *hypóstasis*, has the personal property of filiation: being eternally begotten or eternally generated by the Father *hypóstasis*. Due to the mission of the *Logos ensarkos/prophorikos* being 'spoken' or 'sent' by God the Father into creation by submitting to encoding into flesh, incarnation, that we can perceive and understand. From there we infer the procession of the *Logos asarkos/endiathetos* being 'spoken' or 'sent' eternally (outside creation) too. The triune God is uncreated and therefore within God's being there is no matter, energy, or information (all properties of created objects) present or processed. Nevertheless, holding to an eternal, uncreated, analogical equivalent of the cybernetic 'communication of information' will help us have a mental outline of the eternal generation of the *Logos asarkos/endiathetos*.

Although the one person of the *Logos ensarkos/prophorikos*, due to having a human nature in his divine mission of incarnation, was regulated by divine feedback (prophecy: forthtelling) and divine feedforward (prophecy: foretelling), the eternally generated *Logos asarkos/endiathetos* does not. Within the eternal *hypóstases*, however, we do not find cyclical feedback and feedforward mechanisms. Nevertheless, we can imagine their relations analogically. The Nicene Creed uses the extrabiblical word *homoousios*²⁶¹ which means "consubstantiality" to explain how the latter is of the same substance as the former (Wells, 2012:28). The *Logos asarkos/endiathetos* is clear eternal communication of divine being from the Father *hypóstasis* of the Son *hypóstasis*.

4.6.3.1.3 Communication: Eternal procession of the Spirit

To infer the personal property of procession or spiration (Muller, 2017:293), which is the personal relation of the *spiritus sanctus* to the Father and Son, requires observing the perceivable model of the life and teachings of the visible divine mission of the *Logos ensarkos/prophorikos* as well as the visible divine mission at Pentecost. According to filioque,

²⁶⁰ In fact, Sanders calls the triune God super-personal (2017:285).

²⁶¹ And therefore, rejects the term *heteroousios* and its synonym *anomoios* – of a different essence – used by radical Arians Aetius and Eunomius in the mid and late 4th C. (148). It also rejects *homoeousios* (151) or *homoiousios* (152) – of a similar substance.

the Holy Spirit is actively spirated by both Father and Son, although this should not be overly insisted upon and used as a cause of unnecessary division between West and East churches.

Only through the visible knowledge of the incarnation of Jesus Christ in creation (including his hypostatic person, divine and human natures, and *ad extra* work) can we discover the active spiration by the Father and the Son and passive spiration by the Holy Spirit, the third person of the trinity (Muller, 2017:341). As the *spiritus sanctus*, by being spirated at Pentecost, is the second of two of the divine means of organising creation, Christ's human nature, and church, we have already acknowledged that the *spiritus sanctus* as having this same personal property from the Father and the Son, eternally.

By perceiving Hambrick's 16 attributes of the holiness of the triune God in the *spiritus sanctus* at Pentecost, we can learn and trust that the *spiritus sanctus* has these 16 attributes too. For example, the Holy Spirit, manifesting love, was personal, so He related to individuals. Therefore, the *spiritus sanctus* is personal. The *spiritus sanctus*, since He is God the Spirit *hypóstasis*, has the personal property of passive spiration: being eternally spirated or eternally proceeding from both the Father and the Son *hypóstases*.

Due to the divine mission of the *spiritus sanctus* being 'sent' by God the Father at Pentecost by undergoing 'indwellingness' we can perceive, understand, and infer the procession of the *spiritus sanctus* being 'sent' eternally (outside creation) too. The triune God is uncreated and therefore within God's being there is no matter, energy, or information (all properties of created objects) present or processed. Nevertheless, holding to an eternal, uncreated, analogical equivalent of the cybernetic communication of information will help us have an outline of the eternal spiration of the *spiritus sanctus*. Although the one person of the *spiritus sanctus*, due to indwelling human nature in his divine mission of sanctification, was regulated by divine feedback (prophecy: forthtelling) and divine feedforward (prophecy: foretelling) (see Paul's comments in 1 Cor. 14:32), the eternally spirated *spiritus sanctus* does not. Within the eternal *hypóstases* we do not find cyclical feedback and feedforward mechanisms. Nevertheless, we can imagine their relations analogically. The Nicene Creed uses the extrabiblical word *homousios* to explain how the latter is of the same substance as the former (Wells, 2012:28). The *spiritus sanctus* is eternal communication of divine being from the Father *hypóstasis* and or through the Son *hypóstasis* to the Spirit *hypóstasis*. Grace applied by the Holy Spirit works salvation and sanctification of believers (Muller, 2017:144).

4.6.3.2 Coinherence: Feedback analogy in eternal processions

The ontological trinity, in eternity, does not have feedback cycles. Nevertheless, it is like the divine missions feedback systems by having coinherence. Mutual indwelling or coinherence or perichoresis or *circumincessio*²⁶² within the Godhead in the *opera dei ad intra*, although primary (64)²⁶³ is conceptually distinct from that within the hypostatic union in Jesus Christ²⁶⁴, and in the union of humanity with the divine being²⁶⁵ in salvation. The Father, Son, and Holy Spirit relationally exist in a state of eternal glory within the single divine Being. Mutual indwelling within the Triune God, having no boundary/enviored, is unaffected²⁶⁶ by creation, Christ's human nature, and church²⁶⁷ and is impassible (162-163). It is based on actual glory. It is not actuated by errors that corrects deteriorating performance, since the triune God is maximally great and pure act. There is no regulation within the divine being.

The *Logos hypóstasis* and the *spiritus hypóstasis* are of the same substance as the Father *hypóstasis*. This means that all three *hypóstases* are fully God, and the whole God (Letham, 2019:578). The divine essence subsists in each *hypóstasis* and therefore, they are consubstantial. In the eternal generation of the *Logos hypóstasis*, the Father *hypóstasis* communicates the one, simple essence to his Son. Likewise, in eternal spiration, the Father *hypóstasis* and the Son *hypóstasis* communicate the one, simple essence to the *spiritus hypóstasis* (Barrett, 2021:320). Regarding the ontological triune God, this term applies to the Father, *Logos asarkos*, and *spiritus hypóstases*, who share the same undivided essence yet are distinguished by their relations, or mode of subsistence in the divine nature. The Father *hypóstasis* is characterised by 'paternity', the *Logos asarkos hypóstasis* is characterised by 'sonship' and is from the Father *hypóstasis*, and the *spiritus hypóstasis* is characterized by 'procession' and eternally proceeds from the Father and Son *hypóstases*. Regarding Christology, the *Logos asarkos hypóstasis* is the second person of the Godhead.

From the two divine missions of the *hypóstases* within creation we learn the triune God *ad extra* is in *koinonia* (community, communion, and communication). From this we gain clarity and infer the eternal processions of the *Logos asarkos* and the *spiritus sanctus*. The eternal triune God *ad intra* is an eternal *koinonia* in divine community, in divine communion, and divine

²⁶² Or *enhypóstasis* since the triune God subsist in one another (Muller, 2017:106).

²⁶³ Other terms used are: in-existence, inhabitation, intercommunion (64), and *emperichoresis* (105).

²⁶⁴ The divine nature *actively* dwells in the human and the human *passively* exists within the divine (72).

²⁶⁵ Sanders (2017:197) explains how a person's individual salvation is subordinate to the activity of the mutually glorifying persons of the triune God.

²⁶⁶ He does not suffer effects or experiences "passions" or suffering (Muller, 2017:255). On the other hand, He does have affections which are dispositions toward someone or something (19).

²⁶⁷ God is immutable and impassible (162-163).

communication. Muller (2017:190) defines *koinonia* as community, communion, and communication. We can understand these regarding the ontological trinity. The *hypóstases*, in eternity, are an intra-being community (they have one will), they are in eternal communion, and they communicate. The Father eternally generates the Son as sovereign Lord. The Father and the Son eternally spirate the Spirit as sovereign Lord.

Notions or personal notions are the personal characteristics of the three *hypóstases* determining each of their characteristics. The personal characteristics are identical to the personal relations plus the unbegottenness of the Father. Another way to phrase this is that the notions or personal characteristics are the personal relations and the personal properties of the triune God (Muller, 2017:235).

Perceiving the economic relationships within the *ousia* of the indivisible triune God among the Father *hypóstasis* and the *Logos hypóstasis*, the Father/*Logos hypóstases* and the *spiritus hypóstasis*, and the *spiritus hypóstasis* and the Father/*Logos hypóstases* within creation, we can infer the eternal *ad intra* relations of the ontological trinity. The Father *hypóstasis* eternally begets the *Logos hypóstasis* and eternally spirates the *spiritus hypóstasis*. The Father *hypóstasis* is neither begotten nor proceeds. The *Logos hypóstasis* is begotten and (according to the West) shares with the Father *hypóstasis* in the spiration or sending of the *spiritus hypóstasis* and does not proceed. The *spiritus hypóstasis* eternally proceeds from the Father *hypóstasis* and (or through) the *Logos hypóstasis* but does not beget and is not begotten.

4.6.3.3 Lordship or divine shepherding: Control analogy in eternal processions

The ontological triune God does not exert direct control over creation, Christ's human nature, and church without the divine processions through divine missions. The eternal processions are like the divine mission cybernetics yet without exhibiting direct control within creation. The processions of the triune God within invisible eternity do not exhibit control, but they are the sovereign Lord²⁶⁸. From their flow into creation, through the two divine missions, we experience them personally and spiritually.

Table 24 Cybernetics and *opera dei ad intra*

Analogical cybernetics	<i>Opera dei ad intra</i>
1. 'Information'	Communication in divine being.
2. 'Feedback'	Coinherence of divine being.
3. 'Control'	Sovereign Lordship of divine being.

²⁶⁸ It is worth noting that as *elohim* is plural (i.e., "Gods"), so is *adonai* (i.e., 'Lords')

4.7 Glorified GST and glorified cybernetics

Having started with the two divine missions of the Son and the Spirit and then worked back to the eternal processions of the Son and the Spirit, we can now summarise the ontological trinity as we will one day experience them. The two divine missions of the Son *hypóstasis* and Spirit *hypóstasis* are communicated in a way that is perceivable to humanity as constancy over time and goal-directedness. They present and communicate design (order, pattern, and purpose) understandable to us within creation. The *hypóstases ad extra* are understandable in these categories of thought. From *opera dei ad extra* we can therefore employ design categories of order, pattern, and purpose to mentally model the economic trinity.

4.7.1 Order, pattern, and purpose

The *ordo theologiae* is the irreversible order disclosed by the relations among the *hypóstases*. In human history, the Father generated the Son, and the Father and the Son sent the Spirit. This is the way the one essence subsists in three persons (Barrett, 2021:322). The Father is principle and although He is one being that sends the two eternal processions and two divine missions, He himself does not proceed in eternity and does not have a mission within creation. The triune God is the source of patterns in all systems, including creation²⁶⁹, Christ's human nature, and church²⁷⁰. Likewise, the divine missions provide a pattern of visible *operations* within creation. Since the *Logos hypóstasis* has a pattern of incarnation and the *spiritus hypóstasis* has a pattern of sanctification, we infer eternal patterns originated from the Father. As mentioned earlier, Hambrick (14) summarises the core holiness of the triune God into four quadrants: love, essence, wisdom, and power.

In the written word of God, we are given a 'divine pattern' of special revelation which is perceivable, understandable and conforms to our natural categories (while also correcting, completing, and restoring these categories). Purpose is the reason something exists and that is how to measure its functional success. The triune God gives creation, Christ's human nature, and Church the purpose of Christoformity: liberation, sanctification, and glorification. To accomplish this purpose, the divine missions each have their own purpose, corresponding to the person. The *Logos hypóstasis* has the visible purpose of incarnation and invisible

²⁶⁹ Calvin saw the complex and beautiful composition of the human body as a wondrous work (Jones, 2017:159).

²⁷⁰ Christ's human nature is considered an instrument in human form – the means the *Logos* performs his enfleshed work (Muller, 2017:31).

purpose of knowledge (special revelation) while the *spiritus hypóstasis* has the visible purpose of indwelling at Pentecost and invisible purpose of love (which is application of salvation and sanctification internally). This has the benefit to humanity of *anagenesis* or regeneration (Muller, 2017:23).

The three *hypóstases ad extra* have a single will and act (*opera trinitatis ad extra sunt indivisa*). Since the triune God is one *ousia*, all three *hypóstases* act together in all of God's works in eternity. The scholastics distinguished between one *alius* and another *alius* (persons) rather than *aliud* and another *aliud* (things or beings). This retains the oneness of God's being while retaining the distinction of the three persons (Muller, 2017:20-21), they are not disparate (94). Through special revelation, the triune God has accommodated or adjusted or condescended (Muller, 2017:4) to our knowledge in negative GST and eminent and analogical cybernetics categories. Nevertheless, the doctrine of personal properties helps us perceive this as the works of the triune God ascribed to individual *hypóstases* within eternity. Each divine process is particularly attributable to one *hypóstasis* in eternity. Only the Father *hypóstasis* is unbegotten. Only the *Logos hypóstasis* is eternally generated and only the *spiritus hypóstasis* is eternally spirated. These alone are the *hypóstases* distinctions and are not transferable.

There are five divine properties: paternity, filiation, active spiration, passive spiration, innascibility. These are, in each case, characteristics possessed by one of the *hypóstases* only in connection with the eternal relations that each possesses. Bray (2014:713) observes that although Calvin never equated the properties of the persons with their relations, and instead of Calvin outlining what the properties are, Calvin nevertheless distinguished the properties from the relations. Calvin did not consider the relations as categories but rather as dispositions (Bray, 2014:713). We will summarise the *Logos* and Spirit first, as they are the eternal processions. Thereafter we will summarise the Father.

Table 25 System design and *hypóstases*

System design (in divine missions)	<i>Hypóstases</i>
1. <i>Ordo theologiae</i> .	1. Father (principle). 2. Through the Son . 3. By the Spirit.
2. Pattern of visible divine missions.	1. Father sends and spirates (executes divine missions). 2. Son incarnates. 3. Spirit sanctifies.

3. Purpose of invisible divine missions.	1. Father saves through knowledge and love. 2. Son brings knowledge of God. 3. Spirit brings love of God.
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4.7.2 Logos²⁷¹

The Son's personal property is filiation and identifies him as the divine person eternally begotten by the person of the Father. This is the name for his distinctive personal relation of origin. Filiation of the *Logos*, being begotten or generated, is from another: the Father *hypóstasis*. He is therefore *a Patre* (Letham, 2019:485) – “from the Father”. Therefore, He is also known as the *principiatus* (something brought about by or proceeding from a foundation (Muller, 2017:289). As information is the measure of order in an open system, the *Logos* is the divine means of organising creation²⁷². The *Logos* is how the communicative, relational triune God speaks to us and has crossed the invisible boundary for us, as a divine-human being. The Son is the Father communicating his own being within human form for us to fully understand Him:

the Reformed argue that Christ, as Son of God and Second Person of the Trinity, is the *imago dei invisibilis*, the image of the invisible God, and thus may be called the essential or natural image of God... in his equality with the Father, not in the sense of his being an archetype for humanity (Muller, 2017:159).

In stark contrast, “Pagan gods and goddesses did not communicate. They gave no revelation of themselves” (Wells, 2012:8). The role of the Old Testament prophets was to communicate God's will for monotheism and rejection of polytheism (9) and the New Testament apostles had the same message (10). The *Logos* (being the second *hypóstasis* in the *ordo theologiae*), the eternally begotten Son, is simple and not made of parts (as we outlined in the *ousia*). He is not a member of Boulding's hierarchy of systems. Rather, He is transcendent to all systems while being immanent within Creation, generally, Christ's human nature maximally, and church, specially.

Divinely revealed information or special revelation²⁷³ is interaction with the triune God, through divine-human agency (personal and written word of God), inserted into the open systems of creation, Christ's human nature, and church. Divinely revealed information or special

²⁷¹ John 1:1-5.

²⁷² Colossians 1:15-20.

²⁷³ It is also called *patefactio* which is a disclosure or *manifestation* (Muller, 2017:209) or a making known. *Patefactio* (or *epiphania*) tends to be reserved for the self-disclosure of God in the person of Jesus Christ. This is also known as revelation or apocalypse. (255).

revelation is thus used by the open system (whether creation in general, Christ's human nature maximally, or Church specially) to direct them toward the preset goal of glory. The divine cybernator uses special revelation in this way – through the *Logos* – to restore or maintain stability in the present creation, Christ's human nature, and church. What distinguishes the *Logos* from creation is that He is the source of its order and all systems within it. Whether frameworks, clockworks, cybernetic systems, open systems, or all the way up to 'transcendental systems', the triune God is their source to maintain or sustain them. God upholds the entire universe, is everywhere present, and saturates all of reality. Nevertheless, He uses the means of the *Logos* – the transmission and interpretation (by humans) of divine revelation – to bring order or cosmos²⁷⁴. The *Logos* is also known as *adidaktos* which means 'untaught' and 'uninstructed' which means He knows without having to be taught and He knows absolutely (Muller, 2017:15).

4.7.3 *Spiritus*

The character of the Spirit is procession or spiration, his being proceeded or emanated (Muller, 2017:62). The Spirit emanates from the Father and or through the Son. Spiration is the defining characteristic of the Spirit, who proceeds from (or is breathed out by) the Father and or through the Son²⁷⁵. This is the name for his distinctive relation of origin (Swain, 2020:136). At Pentecost the Spirit was breathed upon the faithful disciples who had already been prepared to be pneumatically indwelt through the ministry of the *Logos ensarkos*. The Spirit has the personal property of passive spiration²⁷⁶. This identifies him as the *hypóstasis* eternally breathed out by the Father and or through the Son. According to Eastern Christianity's terminology the goal of salvation is *theosis*, which is to participate in divine life and become God-like. The Spirit effects deification in us without blurring the creator-creature²⁷⁷ distinction. Theosis is the union and communion that we are given in which we become partakers of the divine nature (2 Peter 1:4) (Letham, 2019:579). Calvin saw the purpose of the Gospel as to make us 'like God' in a kind of "deification" (569).

²⁷⁴ We should also note that the *Logos* is not merely cybernetic (information) because He also transforms energy and matter within creation (for example, miracles, the new creation of the cosmos, and church).

²⁷⁵ The *filioque* clause.

²⁷⁶ *Active Spiration* (Swain, 2020:135) is *not* a personal property of the Spirit *hypóstasis* because it is held by both the Father and the *Logos hypóstases* who eternally breathe out the Spirit *hypóstasis*.

²⁷⁷ *Aseity* – having being from one's self – and *abaliety* – having being from another – is the difference between uncreated and created being (Muller, 2017:42). Therefore, GST is applicable to the former negatively and to the latter positively. Cybernetics is applicable to the former only as derived from visible history, then applied analogically, and to the latter positively.

4.7.4 Father

This finally leads us to the Father. He is called the principium (Muller, 2017:289). The Father's hypostatic character or personal property is paternity (255) which identifies him as the divine person whose eternal relation begets the Son. Although God, called *arche* which means beginning, origin, and first principle, is the creator and orderer (that is, cybernator) of all things, all being (133) and the source of all good in creation (132), the Father is the source of all deity in the trinity (133), the "source and ground of the whole Godhead" (38) or the "source and origin" of the divine persons, eternally begotten Son and eternally proceeded Spirit (132).

Although the God the Father eternally begets the *Logos* (and, with the Son, eternally breathes out the Spirit), he has no relation of origin (Swain, 2020:136). This means the Father includes unbegottenness. Paternity and innascibility are the properties of the Father *hypóstasis*'s active spiration of the Father. Another term for unbegottenness is innascibility (173) or agennesia²⁷⁸ (19) which is the incommunicable property or character of the Father that distinguishes his mode of subsistence from that of the Son and the Spirit, within the divine essence. The Son, being begotten or generated, and the Spirit, being spirated or proceeded, are from another: God the Father. However, the Father is *a nemine* (1) which means "from none". He therefore receives nothing by communication. The Father is principle because he is the source/origin from which the person of the Son proceeds. Due to being unbegotten, He is the principle without principle (Barrett, 2021:323).

4.8 Conclusion

In this chapter we have used the two foundational systems thinking traditions to outline the triune God, as both not an open system and as cybernetic. To do this, we outlined how the natural theology framework, although incomplete and flawed²⁷⁹, includes GST and cybernetics

²⁷⁸ A similar term is *anarchos* or "without beginning" which applies only to the Father (Muller, 2017:26).

²⁷⁹ While it is possible to use GST and Cybernetics Systems Thinking perfectly, it is flawed since it is impossible to gain knowledge of the natures and person of Christ, persons and nature of Trinity, and salvation. So, high level natural theology will always be inadequate in some way, even if it allows for a category of "transcendent simplicity" and "unmoved mover". Without the revealed theology provided by Scripture, natural theology at best provides preparation in the human. My argument is that whether natural, biblical (supplemented by historical), or dogmatic theology, all would use the same frameworks. The frameworks for all of these theologies would therefore be:

1. Information
2. Feedback
3. Control
4. Openness
5. Boundary
6. Hierarchy
7. Emergence/Design

system thinking. From here we discussed how revealed (that is, dogmatic or systematic) theology likewise uses GST and cybernetics system thinking to construct the dogma of the triune God.

We explained how the triune God is not cybernated (regulated, controlled, and directed), does not possess any of the major properties of GST systems (openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation), including Skyttner's 10 irreducible properties of open systems. The triune God is not an integrated system and so exhibits absolute independence, requires absolute dependence from creation, Christ's human nature, and church, and does not exhibit interdependence, as we understand it, of the persons: Father, Son, and Holy Spirit.

We investigated how the two divine missions and eternal processions exhibit divine cybernetic direction. We also outlined how by means of the divine missions the trinity measures performance (effectiveness, efficiency, and efficacy). The divine control will check within creation, Christ's human nature, and church and solve the general control problems (being, behaving, and becoming). The purpose of the triune God *ad extra* as Cybernator is ultimately to create and maintain an integrated creation, Christ's human nature, and church. This requires them to not be independent, nor unidirectionally dependent, but instead interdependent Christians who are increasingly Christlike in their theology: orthodoxy, orthokardia, and orthopraxy. This is so that creation, Christ's human nature, and church is sanctified, liberated, and glorified. This is to bring glory to the *Logos*, the personal ascended word of God²⁸⁰. And this, in turn, is to glorify the triune God. We explained how the triune God *ad intra* is understood using cybernetics analogically but it transcendent and will only be truly known in the glorified state. From here we will move to construct the doctrine of *creatio ex nihilo* by GST and cybernetics frameworks. These two will form the second 'ontology' which attempts to use systems thinking traditions to construct a holistic description of the creation.

8. Transcendence

²⁸⁰ Our recapitulation or new "head" (Muller, 2017:307), the head of the church (55).

CHAPTER 5 DOCTRINE OF CREATION FROM NOTHING

“The salvaging of a sin-wrecked creation is what the Bible is all about” (Naugle, 2002:284). In the previous chapter I gave an overview of **divine GST** and **divine cybernetics** as it applies to the dogma of the triune God, both as conceptual frameworks and as the theological and biblical content of the frameworks. The focus in this chapter is on the second of the two meta-categories of dogmatic theology: **the doctrine of the creation**. All remaining Dogmatic Theology relates to this topic as Christians believe that the creation is an open system²⁸¹, cybernated (that is, it is originated, maintained, and transformed) by the Triune God (28) – the “uncybernated cybernator”. There is only God and everything God created. Therefore, everything that exists is either creator, creation from nothing, or a perichoretic relation between the two (this is a sub-doctrine).

By applying the system principle to the doctrine of the creation from nothing we can state that the whole doctrine of creation from nothing is greater than the sum of its ‘parts’, that is, the terms and concepts contained within the doctrine²⁸². Although the doctrine is built wholly on the terms *creatio*²⁸³ and *ex nihilo*²⁸⁴, it is never ‘merely’ these terms. These terms and concepts, being interrelated and interdependent, provide the whole knowable truth regarding the creation, both general creation and special creations (that is, the *imago dei* in the form of original (Adam and Eve), perfect (Jesus Christ), and corporate (church)).

Christoformity includes two movements: **mortification** (putting to death) and **vivification** (bringing to life). The doctrine of creation from nothing is an integrated whole intended to perform the divine function of Christoformity: sanctification²⁸⁵, liberation, and glorification, in service to the triune God. The main concepts within both GST and cybernetics systems thinking traditions are applicable to the doctrine of creation from nothing. The doctrine of

²⁸¹ God created the cosmos as a uniformity of cause and effect in an open system (Sire, 2020:31).

²⁸² I would say it is top-down design. The parts are only to be really understood as they relate to the whole. The whole is intended from the beginning, while the parts serve the whole. So, the written word of God – now complete – was always intended as a whole but was delivered in units. The units do not become the whole. The whole was always the idea in the mind of God. The same with Dogmatic Theology (dogma of the triune God and doctrine of creation from nothing), since it is drawn from the written word of God, it is a summary of the whole text in propositional form. The propositional units only come after the whole is digested.

²⁸³ *Creatio*: creation. That which has come into being as the world. Since there is only one creator, there is only one *creatio*. The word refers to the one creation of the triune God (Muller, 2017:83).

²⁸⁴ *Ex Nihilo*: Greek for “out of nothing.” In terms of creation, it means that everything made is not of pre-exist (that is, eternal) materials, but instead from nothing (112).

²⁸⁵ Hurtado (2017:155) highlights that Paul’s first letter to the Thessalonians reminds them that God’s will is for their sanctification (*hagiasmos*).

creation from nothing is useful for conceptualising creation both in GST and cybernetics categories. However, using these traditions directly on the creation can be complex.

In this chapter GST is directly applicable to all creation in a positive sense: creation from nothing is the cybernated open system, par excellence. Conversely, cybernetics is not applicable to the general creation (that is, all creation that is not special creation - humanity) since it does not function cybernetically. While general revelation infers a creator, special revelation bears information. Nevertheless, cybernetics is applicable to the special creations – humanity as *imago dei* – since we function cybernetically within creation. We will use these two foundational systems thinking traditions to structure the creational GST and creational Cybernetics frameworks for the doctrine of creation from nothing. After this we will populate both frameworks with theological and biblical content concerning the nature (*natura*²⁸⁶) of the creation from nothing. The origin of creation (*fons naturae*²⁸⁷) was dealt with in the previous chapter. Reformed Scholasticism describes all creation as finite, created, not self-existent, and contingent. It is diverse in essence²⁸⁸ and originated, preserved, and redeemed by the uncreated creator²⁸⁹: Father, Son, and Spirit, the eternal creator, preserver, and redeemer of all things²⁹⁰ (Muller, 2017:90).

We have noted how there are three sources of knowledge of God – the three 'books' or 'lights' – the first two pertaining to this life and the third one to post-resurrection life:

1. Nature
2. Grace
3. Glory

With reference to the doctrine of the creation from nothing, both general and special (*imago dei*), with a focus on knowledge before glory, we will adapt these to the systems thinking frameworks, which results in the following outline:

1. Natural theology of creation: GST and cybernetics

²⁸⁶ Natura: nature. That which is generated. In Reformed Scholasticism it has three meanings: 1. Essence; 2. a particular kind or species of Essence; and, 3. the entire physical universe and its phenomena (Muller, 2017:227). This term cannot be applied to the triune God.

²⁸⁷ Fons naturae: the source of nature. This is the triune God as the divine source of all generated existence.

²⁸⁸ Positive GST.

²⁸⁹ Analogical cybernetics.

²⁹⁰ Eminent cybernetics.

2. Doctrine of creation: GST and cybernetics frameworks
3. Creation: GST framework
4. Creation: Cybernetics framework

5.1 Natural theology of creation: GST and cybernetics

In Reformed Scholasticism, nature has three meanings. The first meaning is essence which is the character of something defined by its primary qualities. The second meaning is a particular kind or species of essence in its actual existence (Muller, 2017:227). The third meaning is the entire physical universe and its phenomena and refers to the order of nature and is used for natural law and natural theology: this is the law implicit in the order of the phenomenal world and the knowledge of God obtainable from examination of the physical universe.

So, the argument in this chapter is that the essence of nature can be partly understood by natural theology. Using GST is useful for this. The order of nature and natural law both use GST and cybernetic frameworks. This is preparatory for the special revelation to come, which uses the same frameworks to articulate the doctrine of creation from nothing: “Thomas (Aquinas) thinks that natural reason forms the foundational structure of which revelation is the superstructure” (Oliphint, 2017:13, parenthesis mine). We are born with a growing awareness of the creation and nature and a suppressible inference of its originator, beyond nature. There is a near infinite amount of knowledge of creation in the natural order available to reason through general or natural revelation. Unlike the knowledge of the triune God, knowledge of creation is not behind “an invisible boundary/enviored” that we cannot cross. From this we draw an inference to an uncreated creator.

Before the availability of dogmatic theology, derived from the written word of God and creeds, natural theology provides a direct form of knowledge of creation which results in an inference to a creator: “In Natural Theology a case is made for God’s existence and for the most basic aspects of His character on the basis of arguments that are accessible to all” (Wisse, 2011:50). By means of common grace through nature, the bare minimum facts are that creation exists and therefore a transcendent creator that is beyond our universe, intelligence, and imagination that is distinct from it, is its originator.

Natural theology, partially correct, incomplete, and imperfect, acknowledges an ordered, patterned, and purposed (and so, understandable) creation, originated by a creator God for

its being, behaviour, and becoming (Rom. 1:20). Abstract knowledge is both natural (general revelation) and supernatural (special revelation). Dogmatic Theology never contradicts the fact of creation. Instead, it supplies revealed truth that transcends the powers of isolated and unaided human reason. We believe dogmatic theology integrates with pre-existing natural theology, correcting it, completing it, and restoring it. We have noted in the previous chapter that by general revelation and natural theology we can perceive order, pattern, and purpose in open (that is, cybernated) systems and cybernetic systems. We do not require special revelation to inform us when something is against the natural order, pattern, and purpose: we have this supplied to us through natural law²⁹¹. Since we are naturally dianoetic beings, we all reason concerning the creation: from it, in it, by it, and through it.

As we noted previously, there are common notions which are basic ideas engraved or implanted in the human mind naturally belonging to all people. The means of knowing in natural theology is natural human reason. I have stated that these common notions are of two frameworks: GST (pertaining to cybernated systems, including openness/cybernated, hierarchy/nestedness, boundary/enviored, and emergence/design pattern/downward causation) and cybernetics (including information, feedback, and control). These are the rational frameworks available to humanity for both understanding creation and inferring an uncreated creator. Dogmatic Theology, derived from the written word of God subsequently completes, corrects, and restores the common notions. Natural theology is a metaphysical system which can thus articulate the concept of God as the supernatural, transcendent being, the first mover, and therefore the originator of the creation from nothing. Therefore, GST and cybernetics systems thinking are complementary metaphysical frameworks applicable to both natural and Dogmatic Theology.

5.1.1 Natural theology of creation and GST

Natural theology describes a creation that has potentiality: it is not pure actuality. In creation we can perceive physical, cybernated systems: openness/cybernated, system boundaries, system hierarchies, and system emergence/design patterns/downward causation. It is possible to reason that the whole creation is an open system, created by the creator. Since it has GST properties, the whole creation is comparable to any composite open system nested within creation. The theological subject of *creatio ex nihilo* can be inferred from the imperfect

²⁹¹ *Lex naturalis* and *lex naturae* (law of nature): this is the order or rule of creation cybernated by the triune God. This results in an internal universal law in the minds of rational creatures or discerned by human reason when it perceives order in nature. It is a member of common notions that all people know that result in either obedience and reward or disobedience and punishment.

general revelation framework within natural theology. God is simple unity but all of creation is compound unity-in-diversity. Likewise, God is pure act while creation exhibits passive potency²⁹².

As argued in the previous chapter we all have an incorrect, incomplete, and imperfect system thinking framework, which special revelation corrects, completes, and restores for us. Thus, in natural theology, we are given a 'natural pattern' within creation which is perceivable and understandable and conforms to our epistemological categories. Natural theology has already prepared us, albeit incompletely, to conceive of positive GST in the cybernated attributes of creation. Within the established framework of general revelation found in natural theology we populate the data from special revelation found in dogmatic theology into the doctrine of creation from nothing. The doctrine of creation from nothing corrects, completes, and restores the existing general revelation framework found in the humble human heart.

5.1.2 Natural theology of creation and cybernetics

Natural theology is the necessary albeit insufficient framework for special revelation concerning the nature and origin of the creation from nothing. Highly specified dogmatic theology concepts of the two eternal processions and two divine missions of the Son and Spirit, the hypostatic union of two different natures in the incarnate word of God, the person Jesus Christ, and salvation by grace (union with Jesus Christ) are simply mysteries that are unavailable via general revelation and thus alien to natural theology. Nevertheless, the cybernetics system thinking framework provides what is necessary to structure these special revelation concepts.

5.1.2.1 *Koinonia*

As stated in the previous chapter, *koinonia* or 'fellowship' includes the three overlapping relational concepts of community, communion, and communication. Although these definitions are usually for the use of *koinonia* as it applies to the Christian life, it is a concept present and available in one way or another, to all humanity. We can understand human communication, human communion, and human community from the special creations (other human beings in *imago dei*²⁹³), and likewise by perceiving the teachings, unity, and practices of church²⁹⁴. From general revelation we can glean concepts of *koinonia* which the special revelation corrects,

²⁹² This is defined as the "inward foundation or basis of being acted upon by another" (Muller, 2017:271). Therefore, the triune God has no passive potency.

²⁹³ The *imago dei* was a concreated gift or natural gift or intrinsic gift from the triune God (Muller, 2017:97).

²⁹⁴ Williams rightly describes the congregation as, "a community, a fellowship, a *koinonia*" (2003:166).

clarifies, and completes. Nevertheless, from creation alone it is ambiguous whether the creator is relational. Does the creator communicate with the special creation? Does He live alone or in community with the special creation? Does He commune with the special creation? These are only answered with an unambiguous 'Yes!' from special revelation in the written word of God. In addition to these natural ideas of *koinonia*, we can understand cybernetics measures of performance (system effectiveness, system efficiency, and system efficacy) based on our experience of them in everyday life. We perceive cybernetic systems that exhibit information, feedback, and control in creation. Lastly, we can also understand general control problems in everyday life (being, behaviour, and becoming).

5.1.2.2 Epistemological preparation

General revelation and natural theology are therefore useful for preparing our minds to understand that the creation from nothing is cybernated by the cybernator. Through creation we are prepared to understand that the triune God is cybernetic. And we are also able to make a clear distinction between creator and creature. Comparable to cybernetic systems all around us, the cybernator measures performance (effectiveness, efficiency, and efficacy), resolves general control problems (being, behaving, and becoming) of general creation and special creations: human beings in *imago dei*. All of this He does through cybernetic means: information, feedback, and control. Natural theology has already prepared us, albeit incompletely, to conceive of a triune God who, although He is not a cybernated system, functions cybernetically. This also provides an analogical tool for understanding how the special creations are in *imago dei* and, therefore, sub-cybernators.

5.2 Doctrine of creation: GST and cybernetics

Applying the system principle to the doctrine of creation from nothing we can state that the whole Doctrine is greater than the sum of its 'parts', that is, the terms composing the proposition. "Like all major religions, Christianity is concerned about the question of origins. The opening chapters of the book of Genesis and their description of God's relationship to the world serve as the primary source of the church's perspective on this basic issue (Naugle, 2002:34)." Inasmuch as it aligns with and reflects the written word of God, the doctrine of creation from nothing regulates the church on the triune God's behalf. As mentioned before, Scripture is the foremost or primary source of Dogmatic Theology. The sacred teaching on the nature and origin of creation serve the main sceptre (which is the dogma of the triune of God) that the ascended Christ uses to rule his church. The doctrine of Creation, as a created epistemological servant of God, is a truth proposition, divinely cybernated by, distilled from,

and reflecting the purpose of the written word of God. Through special revelation, the triune God has thus accommodated or adjusted or condescended to our knowledge of both Himself and creation, using GST and cybernetics frameworks. The doctrine of creation can thus be understood and processed by the human soul²⁹⁵.

5.2.1 The doctrine of creation and the human soul

Through the means of the special creation of Adam²⁹⁶, we all image the triune God within creation. This *imago dei* model (since it is within the creation, it must be created) necessarily uses GST and cybernetics categories, understandable among humans: “(A)s God’s image and likeness, people stand at the zenith of creation, and on the basis of their intrinsic dignity ought to oppose all dehumanizing influences and work to make the world a better place” (Naugle 2002:35, *parenthesis mine*).

We use anthropological language to explain the main human instruments of the enfleshed rational soul or spirit: head, heart, and hands. The doctrine of creation from nothing is the epistemological means that the triune God uses to align this rational soul or spirit to external, objective truth. Metaphorically speaking, the doctrine of creation from nothing communicates truth to the head, divine values to the heart, and divine practical advice for the hands. Translating the propositions and narratives found within the written word of God into the doctrine of creation from nothing proposition, it is fundamental to answer three questions.

5.2.1.1 The ‘head’ of the human soul

What ought we to believe about the nature and origin of the creation from nothing in distinction from the uncreated creator? This is truth concerning the nature and origin of the creation as distinct from the supernatural, uncreated creator. This is orthodoxy or right opinion on the nature and the origin of the creation in distinction from and relation with the uncreated creator. In other words, our head should make a creator-creature²⁹⁷ essential distinction, or cybernator-cybernated distinction without ignoring their relation.

²⁹⁵ “The use of *psyche* suggests that the Bible is capturing something that perhaps includes the physical or biological but also goes beyond it” (Dirckx, 2019:37).

²⁹⁶ Adam is the first and representative man. By rejecting the authoritative divine direction of the triune God, his communion was broken. This led to expulsion from the Garden of Eden and a life of ineffective and inefficient toil with the earth. In the New Testament the one-flesh union of Adam and Eve is used as a metaphor for the spiritual union of Christ and church (Douglas & Tenney, 1989:9-10).

²⁹⁷ The NT (Rom. 1:25, 8:39 & Heb. 4:13) describes a creature as anything created (135). In this theme, the term “New Creation” (2 Cor. 5:17) is used to contrast old and new persons (Gal. 6:15).

5.2.1.2 The 'heart' of the human soul

What ought we to value about the triune God over nature and the origin of the creation from nothing? This is a focus on spirituality in response to the existence of the triune God over the nature and origin of creation. This is orthokardia or right-heartedness towards the triune God over the creation. In other words, our heart should make a value distinction between creator-creature, or cybernator-cybernated, without ignoring their relation.

5.2.1.3 The 'hands' of the human soul

How ought we to live for the triune God in deeds of service or praxis to the creation from nothing? What are the existential or practical effects of the nature and origin of creation. This is orthopraxy or right practice of life for triune God service to the creation. In other words, our hands should make a creator-creature distinction, or cybernator-cybernated distinction, without ignoring their relation. All three categories are relevant to the doctrine of creation, which is derived from the written word of God.

5.2.2. The written word of God

The written word of God is divinely revealed information which establishes divine-human feedback, to establish divine control within creation. Boersma (2017:1) rightly agrees with the church fathers that reading Scripture is participating in a sacrament (without equating it to the explicit sacraments of baptism and communion). It models and teaches divine cybernation within creation. The final divine work of establishing authoritative divine direction within creation was the completion of the canon of the written word of God. As mentioned in the previous chapter, this is the ontological, functional, and exclusive canon. The personal word of God (sent in the divine mission of incarnation and knowledge), the Holy Spirit (sent in the divine mission at Pentecost and love) and the written word of God (divinely spirated as the Bible) inform, establish feedback cycles, and authoritatively direct creation (both general and special) regarding the origin, maintenance, and final consummation of the creation. They are in absolute alignment. Arranged in GST and cybernetics systems thinking frameworks, this benevolent cybernetic influence of the written word of God, resulting in special revelation, provides the following data: All creation is an open system, cybernated by the uncypernated cybernator.

- a. General creation is not cybernetic.
- b. Special creations, being *imago dei*, are cybernetic.

5.2.2.1 The written word of God and the doctrine of creation

The written word of God informs, establishes feedback cycles, and benevolently controls the doctrine of creation. The doctrine of creation itself is not only cybernated but it is cybernetic (it assists Christoformity). It is subject to a higher order cybernetic influence (spiration) from the uncibernated cybernator and is divine information, divine feedback, and divine control.

In Genesis 1-2 the written word of God communicates special revelation about the creation from nothing in both narratives and propositions. The incarnate personal word of God, in alignment with the written word of God, likewise communicated special revelation about the creation from nothing, verbally (He taught and proclaimed truth) and non-verbally (He performed miracles and fulfilled prophecies), narratively (He taught in parables), and propositionally (He taught plainly). Williams (2003:146) sees Jesus's miracles as "intentional, calculated, and integrally connected with the verbal message He proclaims".

The doctrine of creation is distilled from these sources and must be faithful to the triune God as well as to the whole written word of God. It is the orderly, patterned, and purposeful collection of divinely revealed information in propositions, developed over church history. The doctrine of creation from nothing is a created epistemological servant to the special revelation of the written word of God. Anyone now articulating it faithfully is comparable to making an offering to the triune God himself.

The Chalcedonian creed²⁹⁸, which, among other things, defends both the divine and the human natures of Christ, automatically defends the doctrine of creation from nothing. Since both are concerned with *ousia*, they are inseparable. In other words, with a clear understanding of Jesus Christ having two natures (one uncreated and one created) we have a good outline of the creator-creature distinction and relation modelled within a single person. Conversely, if we admit a creator-creature distinction and relation in creation, it will be useful for understanding the two distinct natures of Jesus Christ. The doctrine of creation from nothing intends to align the human worldview with objective truth.

5.2.2.2 Worldview throughput

The doctrine of creation from nothing, as worldview regulator, has a three-stage process, together called throughput: input, transformation, and output.

²⁹⁸ The two natures of Jesus Christ were incompatible and remained separate, but they were united without confusion, change, separation, and division (Bray, 2014:362). From this we learn of creator-creature distinction and relation in terms of the natures of Jesus Christ.

5.2.2.2.1 Worldview input

Partially or totally false propositions in the worldview milieu, surrounding the Christian theism worldview, concerning the concept of creation, 'enter' it from the relevant environment. These propositions concern cosmogony, cosmology, and biology. The way this happens is that a person's worldview or heart or reason, is confronted propositionally by the doctrine of creation from nothing which articulates divine origin, divine fine-tuning, and divine informational complexity. The human heart will always have pre-existing answers in propositional form to these questions and whatever the human heart answers are, they will be drifting in the relevant environment. In the catalogue of worldviews, we can see that there is a binary option of either open or closed universe. This can be understood as supernaturalism (or general theism) versus naturalism (or materialism). Christian theism logically requires supernaturalism or an open universe.

Drawing from the two major categories found within Christological heresies, Gifford (2022:11-12) asserts that there are likewise two major categories of cosmological heresies. These are based on what he has termed the "Plotinian Ambiguity"²⁹⁹:

- a. Dichotomist-dualist (cosmological Ebionism, Arianism, and Nestorianism).
- b. Monist (cosmological Docetism, Apollinarianism, and Monophysitism).

Without the balancing influence provided by the truth of the doctrine of creation from nothing, theology swings over to one side or the other. In other words, naturally the worldview of people (lacking special revelation) will either lean towards 'monist' or 'dichotomist-dualist'. The truth of the doctrine of creation from nothing is a healthy balance of the unity and distinction and relation between the uncreated creator and the creation from nothing, between uncybernated cybernator and cybernated open system.

The correct application of the GST framework results in understanding that creation is open (that is, cybernated). Likewise, the correct application of the cybernetics framework results in understanding the origin, continuation, and relation of creator to creation by the two divine missions of the Son and the Spirit (that is, divine cybernetic control within creation).

Vidu (2021:18) defines the divine missions or 'sendings' as 'the manifestation of a divine person in our world through union with a created thing, or effect'. The two divine missions provide enough theological truth to logically infer the eternally begetting and spirating Father,

²⁹⁹ The *Plotinian ambiguity* is monist versus dichotomist-dualist (Gifford, 2022:7).

eternally begotten and spirating Son, and eternally spirated Holy Spirit, resulting in an understanding of the *opera dei ad intra*, the ontological trinity. The divine missions are first visible – via the incarnation of the *Logos* and the tongues of fire accompanying the Holy Spirit at Pentecost. When the early church was praying in the upper room, a sound came comparable to the blowing wind, and tongues of fire separated and settled on individual Christians. In this way the divine mission of the Holy Spirit was made manifest within creation (Acts 2:1-4). Thereafter the invisible divine missions of the two persons are 'sent inwardly' to sanctify us (25). The invisible missions are the indwelling of both the Son and the Spirit in the hearts of Christians (102).

From this, we can understand the *imago dei*. Since humanity – the image of God – is both cybernated open system (we have been imbued with divine order, pattern, and purpose in created form) and representationally cybernetic (we can manifest divine order, divine pattern, and divine purpose into creation), we are uniquely 'godlike' creatures in creation.

5.2.2.2.2 Worldview transformation

The doctrine of creation from nothing liberates, sanctifies, and glorifies church with truth. It has truth in the form of this proposition: creation has its origin, maintenance, and consummation in the uncreated creator, who is one being in three persons. The truth is that creation is cybernated by the uncybernated cybernator. Cybernation here establishes both the distinction and relation of creator and creation (his transcendence and immanence). The recipient worldview (or heart or reason) is confronted with the truth of the Christian theological proposition regarding the creation from nothing. It then faces a choice to reject, accept, or amend the partially or totally false propositions to which it is committed (it will be some form of the Plotinian Ambiguity). If the recipient submits humbly to the truth-proposition it will become aligned with the orthodox Christian theological teaching regarding the nature and origin of the creation.

5.2.2.2.3 Worldview output

The doctrine of creation from nothing is a propositional truth that causes transformation of the recipient's worldview, and it contributes to the Christian theism worldview regarding the nature and origin of the creation in propositional form. The worldview output can be of two kinds: glorifying the higher system (the ascended personal word of God) or waste. Useful output would be the glorifying Christian theism worldview regarding the nature and origin of creation in propositional form. On the other hand, worldview waste regarding a person's theological worldview is rejected and expelled as non-glorifying (that is, heterodox) propositions

concerning the nature and origin of creation. These would be in one or more of the Plotinian ambiguity categories of either monist or dichotomist-dualist. The input to one system may be the output from the subsystem: this explains how the Christian theism worldview develops over time. For example, internal debates regarding the nature and origin of creation (in reaction to the Plotinian ambiguity) produce progressively nuanced and careful definitions that remain orthodox. Therefore, we see various Christian thinkers refining the doctrine of creation over time.

5.3 Doctrine of creation and GST

The doctrine of creation, being a system, is a propositional arrangement of terminological 'parts' or sub-axioms, exhibiting behaviour or meaning that the individual terms do not. It has emergent theological properties or synergetic effects: sanctifying, liberating, and glorifying truth concerning the nature and origin of the creation. This doctrine, like all truth, comes with the interchangeable transcendentals: goodness, and beauty. The doctrine of creation, as a composite, created servant of the written word of God, has constancy over time and goal-directedness. It exhibits and extols ordered, patterned, and purposeful truth. Unlike a goal or objective, the doctrine of creation's purpose or final cause (that is, whole truth) is relentlessly pursued but ultimately unattainable. The human understanding of the nature and origin of creation is never exhaustive.

5.3.1 The doctrine of creation and system design

The doctrine of creation, being a cybernated and cybernetic system of truth, bears properties of system design.

5.3.1.1 Ordered³⁰⁰ truth

There is truth, goodness, and beauty in the doctrine of creation from nothing. It is orderly since it is assembled and presented in a systematic way and that is why it is the second founding member of systematic theology. It is the second half in the truth concerning the creator-creature distinction and relation.

³⁰⁰ The *ordo rerum creatarum* describes the 'order of created things' which is the fixed order ordained by the triune God which governs the operation of all things in the creation from nothing, under divine providence, in the work of salvation, and in final glorification (Muller, 2017:249).

5.3.1.2 Patterned truth

The doctrine of creation from nothing has a pattern of describing its nature and origin in relation to the creator, that is, from nothing. This pattern integrates with the pattern of the dogma of the triune God. Together, they provide a matching pattern of truth: the creator-creature distinction and relation.

5.3.1.3 Purposeful truth

The purpose of the doctrine of creation is the reason it exists and that is how to measure its functional success. Does it result in orthodoxy, orthokardia, and orthopraxy? Serving the written word of God's purpose or final cause of Christoformity: liberation, sanctification, and glorification, the doctrine of creation's purpose or final cause is the reason it exists and indicates how to measure its functional success. The purpose of the doctrine is to complete the truth about being, having started with the truth concerning the uncreated creator, the truth concerning all creatures provides the total purpose of Dogmatic Theology.

Table 26 System design and doctrine of creation

System design	Doctrine of creation
1. Order	Orderly presentation of truth.
2. Pattern	Pattern of describing the origin, continuation, and transformation of creation.
3. Purpose	Purpose of establishing creator-creature distinction and relation.

In addition to showing organisation, the doctrine of creation, being a cybernated composite system, has these attributes:

5.3.1.4 Continuity of identity

This is the preservation of structure amid changes. The doctrine of creation, serving the authoritative divine direction of the written word of God, has constancy over time. For example, historical theology shows the biblical origin and ecclesiological development and maintenance of this doctrine and its defence by leading thinkers in the church. From this we perceive that the doctrine of creation has been created, preserved, and developed. Historical theology teaches us that this core Christian doctrine has been taught until today.

5.3.1.5 Goal-directedness or teleology

The doctrine of creation has the goal of establishing truth, goodness, and beauty in the proposition: creation is from nothing. Theologically, this results in Christoformity which is the sanctifying-liberating-glorifying function of truth (since it is cybernated by the written word of God). To have divine goal-directedness or teleology, the doctrine of creation must be cybernated by the written word of God, the Holy Spirit, through and with the divinely directed church. Ultimately, all cybernation in the doctrine of creation is sourced in the uncypernated cybernator, the creator himself.

Table 27 System design and doctrine of creation

System design	Doctrine of creation
1. Continuity of identity. 2. Preservation of 'structure' amid changes. 3. Constancy over time.	One truth (that is, that creation is <i>ex nihilo</i>).
1. Goal-directedness. 2. Teleology.	One goal (that is, that creation should not be confused with Creator).

5.3.2 Behaviour of the doctrine of creation

The doctrine of creation is embedded in a living being – church – and so it has real-world output. The doctrine of creation's 'behaviour' is this set of attributes present in the real-world of the people of God: the propositional answer to questions of the 'head': truth about the nature and origin of the creation (it is cybernated by the uncypernated cybernator); the 'heart': spirituality away from the creation (the uncypernated cybernator takes priority over cybernated); and the 'hands': existential or practical service of the creation (serving the uncypernated cybernator means serving the cybernated). The doctrine of creation is identified by its behaviour. As a system, the doctrine of creation satisfies the three behavioural conditions:

1. Behaviour of each term effects the behaviour of the whole doctrine. For example, holding to any of the six cosmological heresies listed in *Hexagon of Heresy* (2022:134-135) due to wrongly defining or interpreting the two key terms (or ignoring or rejecting them), results in a doctrine that is completely disintegrated.
2. Behaviour of terminological parts is interdependent. For example, holding to an unorthodox definition of *creatio* or *natura* of creation negatively effects the understanding of *ex nihilo* or *fons naturae* of the triune God, and vice versa.

3. In whatever way the subsystems (the individual terms) are defined, both influence the behaviour of the whole doctrine of creation: they are not independent (which would mean no effect). For example, the concepts of *creatio* or *natura* or *ousia* will affect the doctrine.

The behaviour of the doctrine of creation is observable by its **output**. The doctrine of creation, although it is a conceptual and not a physical system, exhibits 'behaviour' since it has output: truth concerning the divine origin, divine maintenance, and divine transformation of creation.

5.3.3 *Ousia* and *hypóstases*

When we teach 'creation is from nothing' this is irreducible. It is the simplest possible articulation of the doctrine of creation. Naturally this proposition requires further explanation of the terms and concepts behind nature and origin. The general creation can only be reflected upon *ousiados* – essentially. The special creation, since it is a subset of creation, can be reflected upon both essentially as well as *hypóstatikos* – hypostatically or personally. We have learned from the dogma of the triune God the *ousia* of *imago dei* is composite: we are cybernated systems that are personal, relational, and spiritual (that is, we are cybernetic representatives of the uncybernated cybernator).

The doctrine of creation is cybernated and so the exact terms used are interdependent. The doctrine of creation resists unidirectional dependence of one term on the other and it resists independence of either term. When it comes to the structure of the doctrine of creation there are three necessary properties of the terms and concepts *creatio* and *ex nihilo*: the set of relations; their positional value; and their dimensional domain. These three structural properties of all systems help us distinguish between an aggregate and a system. With an aggregate there would be, for example, no 'positional value' in the relations between the terms *creatio* and *ex nihilo* and the whole doctrine of creation.

Once the doctrine was complete, the terms of the doctrine of creation – *creatio* and *ex nihilo* – are presented to the reader as an integrated unit of propositional truth. Teaching the one composite nature of the creation as a system is the starting point and then we move to the from nothing. The latter logically infers that the creation system is cybernated by the uncybernated cybernator. Thus, the doctrine is an integrated unit of propositional truth, but it automatically directs us to the dogma of the triune God. The doctrine of creation is codified in the church's teachings and presented as an integrated unit of propositional truth. Since the doctrine of creation is a servant of special revelation, which is divine-human communication and information, it must exist within a concrete system. This concrete system is the doctrine

in written and published form, and then all published works derived from continued Christian reflection on the doctrine.

5.3.4 The doctrine of creation and the GST systems thinking tradition

The systems thinking tradition of GST is present in the doctrine of creation from nothing since it is concerned with clearly proclaiming and teaching³⁰¹ the output of the canon which presents creation as an open system originating from, sustained by, and transformed by an uncreated creator. The doctrine of creation from nothing, since it is a by-product of the truth of the canon, coming from, and after, the canon to assist the mission, can be understood in the major GST categories: openness/cyberneted, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation. In engineering a whole conceptual system of the doctrine of creation from nothing, we bear in mind these four parameters that are likewise true of the written word of God which is the authoritative divine direction for church.

5.3.4.1 Openness/cyberneted of the doctrine of creation from nothing

The doctrine of creation from nothing is a cyberneted open system derived from the Scriptures. The doctrine was engineered by the post-apostolic Christian leadership from the ontological, functional, and exclusive canon, at the seven ecumenical councils, in response to the challenges of the major Christological heresies.

5.3.4.2 Boundary/enviored of the doctrine of creation from nothing

The doctrine's boundary/enviored is defined by the seven ecumenical creeds. The creeds establish the boundary/enviored: there is a defined orthodoxy. As the creeds have a boundary, the doctrine of creation from nothing has a boundary. Some of the roles of the creeds is to correct our cosmogony, cosmology, and biology from false ones, for example, Gnosticism (Galan, 2015:4). The Apostle's Creed calls God the "Maker of heaven and earth" (6) as does the Nicene Creed (10-11), establishing a conceptual boundary/enviored (distinction) between creator and creature, without denying a relation. The boundary/enviored of the doctrine of creation, like all boundaries, is difficult to locate. It is mostly determined by several criteria which the terms must fulfil to be considered "inside" the doctrine of creation system.

³⁰¹ Douglas & Tenney (1989:423) define a teacher as "one who imparts instruction and communicates knowledge of religious truth or other matters (Eph 4:11)". This is a cybernetic function of Church leadership.

Why identify the doctrine of creation boundary? Without identifying the boundary/enviored of the doctrine, it will be difficult or impossible to identify the relevant terminological and conceptual environment existing outside of the system. The relevant environment is everything outside the boundary/enviored of the doctrine (the competing worldview milieu that produced the major creation heresies, that is, the Plotinian ambiguity). The boundary surrounds the doctrine in such a way that the intensity of interactions across this line is less than that occurring within the doctrine. In other words, the focus in the orthodox articulation of the doctrine is primarily confession or worship and secondarily apologetic or evangelistic.

Crossing the orthodoxy boundary requires transformation or conversion³⁰². When it comes to data coming from the worldview milieu, the theological boundary/enviored of the doctrine has a coding and decoding property. This means that the terminological output (that is, the strict articulation of the terms *creatio* and *ex nihilo*) is not identical to the terminological input (the contemporary definitions of the terms and concepts (*ousia*, *natura*, *creatio*, and *ex nihilo*, prior to creedal solidification). As mentioned in the previous chapter, as the church wrestled with the fact that the written word of God is the highest authority for faith and practice, they had to make a distinction between the definitions of *ousia* and *hypóstases*, which had been considered synonymous. This would logically affect all other doctrines dealing with being and personhood. As we will indicate later, this is especially true for biblical anthropology, Christology, and thus, ecclesiology.

Dogmatic interface is necessary for when conceptual systems do not interact boundary/enviored to boundary/enviored. Here we see the value of the creeds which provides a shared space for debate between the doctrine and the competing cosmological heresies found in the Plotinian ambiguity.

5.3.4.3 Hierarchy/nestedness of the doctrine of creation from nothing

“Creation is not coeternal with God. Before the beginning of the created world, God dwelled alone” (Wells, 2012:8). These two truths together compose all revealed, knowable truth about being. Since the doctrine is a composite system, it is also a:

5.3.4.3.1 Supersystem

³⁰² In the Old Testament, the first family of the triune God – Israel – had a concept of liminality which was a kind of boundary. See Imes, *Bearing God's Name* (2019).

Each of the two terms *creatio* and *ex nihilo* in propositional form composing the doctrine are likewise composed of their own subsystem collections of integrated connotations and denotations in propositional form, and,

5.3.4.3.2 Subsystem

The doctrine is ontology. The doctrine itself is an ontological statement. Thus it is knowledge of being. It is truth about *creatio* (the cybernated system) and *ex nihilo* (the uncybernated cybernator) of the *creatio* (contingent being). The other subsystem is the truth about the triune God (necessary being) already articulated in the dogma of the triune God.

Table 28 Hierarchy/nestedness of written word of God system

Supersystem	Knowledge of being (ontology)		
System	Dogma of triune God	Doctrine of <i>creatio ex nihilo</i>	
Subsystems	<i>Ousia</i> and <i>hypóstases</i>	<i>Creatio</i>	<i>Ex nihilo</i>
	Necessary Being and Persons	Contingent being and persons	Necessary Being

5.3.4.4 Emergence/design pattern/downward causation in the doctrine of creation from nothing

The doctrine of creation holistically manifests emergent properties associated with life-giving Christoformity: liberty, holiness, and glory. This is crafted by the intelligent intentions of the triune God along with, and through submitted human beings, that is, Spirit-filled Christians. The doctrine exhibits emergence from a simple, terminological, axiomatic proposition.

5.4 Skyttner's 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties of the doctrine of creation from nothing, we can focus on more detail. The doctrine is an open system cybernated by the written word of God. Using Skyttner's irreducible properties of systems, we can summarise them into 10 conceptual principles applicable to the doctrine.

5.4.1 Interrelated and interdependent parts

The doctrine is composed of terminological 'parts' (that is, the discrete terms *creatio* and *ex nihilo* in propositional form). These terminological parts are in union: they are integrated because they are in mutual relation towards and mutual dependence upon or 'service toward' one another. The terminological proposition is not in disunity. Disunity occurs from one-way

terminological dependence (*creatio* depends solely upon *ex nihilo* or vice versa) or by being terminologically unrelated or independent (*creatio* and *ex nihilo* are totally unrelated terms).

5.4.2 Holism

This means the 'Big Picture' takes priority. A holistic emphasis in the doctrine is necessary and positive. Any form of reductionism which focuses primarily or merely on terms and concepts while ignoring the doctrine is not exhaustive, comprehensive, and holistic. This is how it was possible to teach the fundamentals of *creatio* and *ex nihilo* while definitions for them were still being challenged by cosmological heresies.

5.4.3 Teleology

The doctrine has the goal of Christoformity: To sanctify, liberate, and glorify Christians through divinely communicated truth regarding the *creatio* (creation) and *ex nihilo* (from nothing). The liberation, sanctification, and glorification of church, through the doctrine, will manifest as the unified and integrated church system: interdependence between Christians, dependence on the transcendent creator over creation, and independence from sin and idolatry.

5.4.4 Transformation

Active and beneficial conversion within the relevant environment. The relevant environment for the doctrine is the competing worldview milieu or theological and philosophical propositions in human hearts and reason, surrounding Christian theism. The foundational one is naturalism which holds to a closed universe. A closed universe would mean the creation is not cybernated by a cybernator. The doctrine, as distilled truth, converts the partially or totally false theological propositions in hearts to the Christian theism worldview in propositional form. The conversion is to orthodoxy, orthokardia, and orthopraxy with regards to the nature and origin of the creation. This competing worldview milieu consists of the collected worldviews or hearts of all humanity, in propositional form, concerning creation. They are summarised by the Plotinian ambiguity.

Since it is truth concerning contingent being, it converts the theological worldviews of those hearers who respond with a humble heart to allegiance to the cybernator. The conversion of the hearts (worldviews or reason) of hearers results in deliverance from sin and death as the orthodox re-defining of the nature and origin of creation, redirects their lives. Whatever definition a person has for one or both terms must be correctly defined for them to properly confess and align with truth.

5.4.5 Inputs and outputs

The relevant environment surrounding the doctrine (that is, the theological worldviews of sinful human hearts in propositional form, usually the Plotinian ambiguity) continually provides inputs (partially or totally flawed propositions concerning the nature and origin of the creation) which are then converted into the orthodox doctrinal proposition aligned with the truth of the nature and origin of the creation (that is, the Christian theism worldview of an open universe, stated in propositional form). The doctrine has the following propositional throughput:

5.4.5.1 Input

Partially or wholly false propositions from the theological worldviews of sinful human hearts concerning creation (one of the cosmological heresies formed by the Plotinian ambiguity).

5.4.5.2. Transformation

Conversion of partially or wholly false propositions concerning creation to the true theological proposition found in doctrine (that creation is an open, cybernated system and the triune God is its cybernator).

5.4.5.3 Output

Orthodox doctrinal theological worldview in the heart in propositional form: the doctrine of *creatio ex nihilo*.

5.4.6 Negentropy

As mentioned in the previous chapter, Reformed Scholasticism distinguishes between Scripture and the triune God (the revelation and the one who reveals Himself) as the two foundational subjects of all theology. The former is the means, and the latter is the subject. Special revelation concerning the nature and origin of creation is necessarily in the form of information which is always negentropic (it brings order). The doctrine, being information, seeks to bring **order** (truth about the nature and origin of the creation) to human hearts (worldviews) by reducing disorder (untruth about the nature and origin of the creation). Theological disorder exists in the surrounding sinful world which is replete with partially or totally false propositions about the nature and origin of creation. The cause of this entropy is the general revelation which results in natural theology which, although a necessary framework for dogmatic theology, is inherently flawed and broken. It is from natural theology unaided by special revelation that we arrived at the Plotinian ambiguity.

5.4.7 Regulated (cybernated or controlled) by authoritative divine direction

The doctrine is cybernated by the written word of God (which always includes the Spirit) assisted by the 'Great Tradition' of the church (itself a cybernated community) who regulate it by detecting and correcting necessary deviations through feedback which results in propositional stability in the form of terminology in dynamic equilibrium. Historical theology shows us the generally accepted doctrinal statements as the result of the seven ecumenical councils.

5.4.8 Hierarchy/nestedness

As stated previously, the doctrine is an integrated system of revealed knowledge concerning the nature and origin of the creation. And so, the dogma of the triune God (theology proper) together with the doctrine of creation from nothing compose the ontology supersystem (that is, all possible knowledge of being). The doctrine is composed of two terms which appear consecutively as systems in their own right: *creatio* and *ex nihilo*. The one complex nature (cybernated creation) is stated before the origin (from nothing: the uncybernated cybernator).

5.4.9 Terminological differentiation

The doctrine has one function in service of the written word of God. This is concisely communicating truth in propositional form to sanctify, liberate, and glorify Christians. Nevertheless, the doctrine proclaims and teaches this knowledge in a pair of discrete terms – *creatio* and *ex nihilo*. Each term reflects its own subject in language, and we cannot understand one term without reference to the other, they come as a pair. Furthermore, the doctrine of the creation from nothing naturally is connected to the dogma of the triune God, inferring a relation.

The doctrine has functional division and co-ordination of labour among the terms. Each term in the doctrine is distinct and focused on knowledge about the creation in some discrete concept. For example, the term *creatio* will articulate the unity and diversity (GST) of the nature of the creation, whereas the term *ex nihilo* will articulate the divine origin (cybernator). These two terms together are fundamental for formation of a holistic orthodox doctrine in propositional form. They were defined and assembled with thoughtful consideration over centuries in the doctrines from the seven ecumenical councils.

5.4.10 Equifinality and multifinality

To accomplish sanctification, liberation and glorification, the truth of the doctrine converges or diverges epistemologically and socially. The heart or worldview or reason has pre-existing commitments drawn from general revelation, regarding the creation and its origin, maintenance, and final state. Depending on the reaction to the doctrine, it will result in epistemological and social unity or diversity.

5.4.10.1 Equifinality and convergence

The doctrine has equally valid alternative ways of attaining the same objectives (that is, truth resulting in liberty, holiness, and glory) from different initial conditions of a person's knowledge of creator and creation. Worldview convergence occurs when a person who has a worldview or heart or reason that is accurate in some ways and inaccurate in other ways will have these all brought into alignment with truth. An example here would be a *deist* person believes that God is only transcendent and thus wholly separate from creation. In this case the creator and creation are separated, and the doctrine will teach immanence of the triune God, converging the transcendent concept to the immanence concept. Social convergence occurs when a group with a diverse set of views on creation, its origin, maintenance, and final state, will be brought into unity through the doctrine. Theologically, this can be understood as the process of discipleship over time.

5.4.10.2 Multifinality and divergence

The doctrine has equally valid alternative ways of attaining the same objectives (that is, truth resulting in liberty, holiness, and glory) from a given initial state of a person's knowledge of creator and creation. Worldview divergence occurs when a person who has a worldview or heart or reason that is accurate in some ways and inaccurate in other ways will have these all brought into alignment. An example here would be a *pantheist* person believes that God is only immanent and thus one with creation, that "nature encloses and contains the sacred" (Wells, 2012:11). In this case the creator and creation are not distinct, and the doctrine will teach transcendence of the triune God. Social divergence occurs when a group with a unified set of views on creation, its origin, maintenance, and final state, will be brought into diversity through the doctrine. Theologically, this can be understood as the event of salvation, which will divide one person from another.

5.5 Doctrine of creation as an integrated system

From this overview of the doctrine as a system, we conclude with the threefold GST theme true of all cybernated open systems:

5.5.1 Independence

Independence of the two terms is undesirable. Therefore, the terms *creatio* and *ex nihilo* are not independent of one another. Absolute ontological independence is a property of God alone³⁰³.

5.5.2 Unidirectional dependence

One term depending absolutely on another term is undesirable. The term *creatio* and the term *ex nihilo* depend on and serve one another. Although dependence of terms is unequal (for example, *creatio* is first and *ex nihilo* is second, both terms are foundational and central to doctrine of creation from nothing or 'core' to the Christian theism worldview), it is never one-sided, it is always mutual. Absolute ontological dependence is to be directed to God alone³⁰⁴.

5.5.3 Interdependence

The two terms *creatio* and *ex nihilo* mutually depending on and serving one another is desirable. Both terms are so arranged as to serve each other as an integrated unit of knowledge of the nature and origin of creation.

This system integration is the beautifully orchestrated result of the doctrine of creation from nothing being cybernated by the written word of God through the post-apostolic church doctrines. We have looked at how the doctrine of creation is a system, now we will investigate how it is cybernetic.

5.6 Doctrine of creation as cybernetic: Information, feedback, and control

Since the term cybernetics is derived from the Greek noun, *kubernetes*, which means 'to pilot or rudder', creational cybernetics serves the divine purpose by conceptualising and modelling the doctrine of creation from nothing, positively – which is the way of eminence (*via eminentiae*). The doctrine directs us to perceive and understand the creation in a theological

³⁰³ Boersma (2017:1) reminds us that everything the triune God has made participates in his life.

³⁰⁴ McFarland (2014:2), "If God is to be confessed as Lord without qualification, then everything that is not God must depend on God for its existence without qualification".

context and teaches that the world, including spiritual reality, is distinct from creator and made outside Him (Bray, 2014:166), without ignoring their relation³⁰⁵.

Using creational cybernetics with a focus on cybernation and cybernetics of creation (general and special creations) will result in conceptualisation of the rich interaction of the uncreated creator and creation: divine-human goals, predictions, actions, and response. Creational cybernetics is concerned with describing the doctrine of creation in terms of information, feedback, and control. As stated in the previous chapter, the *opera dei ad extra* is cybernetic, including production of the written word of God (which itself functions cybernetically in church). Therefore, the doctrine is cybernetic too.

The cybernetic stages of the doctrine are information, feedback, and control. This applies to both sub-categories of general and special creations. The doctrine of general creation is concerned with the origin and fine-tuning (cosmogony and cosmology) of the cosmos and the information-rich properties of living creatures (biology). The doctrine of special creations (concerning Adam and Eve, Jesus Christ, and church as *imago dei*) include all properties of general creation with the added function of divine representation within creation: they embody and represent divine order, divine pattern, and divine purpose. Since both sub-categories of the doctrine of creation (general and special) have the same cybernetic function in church, we will deal with them under a single heading.

The doctrine is cybernetic for church. Through information, feedback, and control it liberates, sanctifies, and glorifies church by articulating the divine origin (cosmogony), divine fine-tuning (cosmology), and DNA (biology)³⁰⁶ in all creation. In addition, the *imago dei* have representational spirit-stewardship of the triune God in various forms (original, perfect, and corporate). The doctrine serves the word of God by providing an expected measure of performance for effectiveness, efficiency, and efficacy of the special creations. If church understands the origin, maintenance, and consummation of all creation as being from the triune God, establishing the creator-creature distinction and relation, this results in effective, efficient, and efficacious worship. For example, the truth of the creator-creature distinction and relation can stop idolatry.

Likewise, the doctrine assists the word of God in solving general control problems in church: the being, behaving, and becoming the glorifying church depends on an accurate

³⁰⁵ In *Creation Ex Nihilo* Gary A. Anderson notes that the doctrine provides a balance between divine transcendence and divine immanence, which requires some acknowledgement of divine relation with Creation (2021).

³⁰⁶ Feser notes that DNA and the genetic code “seems teleological through and through” (2020:45-46).

understanding of both general and special creations. Lastly, the doctrine provides a model of divine order, divine pattern, and divine purpose that can and should be emulated by the *imago dei* in its various forms (original, perfect, and corporate). The doctrine cybernates church in a non-coercive (that is, loving, benevolently influential) way. It integrates with pre-existing general revelation (of the divine origin of creation), and so corrects, completes, and perfects the natural law within those who have not completely suppressed the truth (Rom. 1:20). As the apostle Paul notes, the natural inference to the transcendent divine origin of creation can be suppressed, leading to catastrophic results (Rom. 1:21-32). On the other hand, if the truth is not suppressed, it will automatically align with the cybernetic function of the doctrine: the truth. In this sense, natural theology and dogmatic theology will sometimes agree and sometimes disagree.

5.6.1 Doctrine of creation: Information

We have already discussed how special revelation concerning the being and persons of the triune God is communicated through the written word of God (that is, by information). This is a created open system, within creation. It is thereafter constructed into the dogma of the triune God: the central and foundational dogma upon which everything rests. The written word of God, although thoroughly saturated in data concerning the triune God, also communicates truth on other subjects. Special revelation communicates information to the reader regarding the origin of all contingent being (that is, general and special creations).

Genesis 1 informs us that the general creation (the origin and fine-tuning of the cosmos and the living creatures with DNA) were brought into existence by the spoken word of God, who is the uncibernated cybernator (John 1:1). Sanders (2017:70) states: “Creation was not required, not mandatory, not exacted from God, neither by any necessity imposed from outside nor by any deficit lurking within the life of God.” The special creation of Adam and Eve were a subset of general creation: the heavens and the earth and the living³⁰⁷ creatures and so they were subject to cosmological and biological laws of nature.³⁰⁸ The original image of God and the cultural³⁰⁹ mandate were given to them in order that they may function as sub-cybernators

³⁰⁷ Ψυχῶν – both animals (Gen. 1:20-21, 24, 30; 2:19 ABP) and Adam (Gen. 2:7) are called “living souls”.

³⁰⁸ Since God gave them the unique status of being his representatives, there is special dignity and worth upon human life and this will be reiterated in Genesis 9:6.

³⁰⁹ “Culture” can be defined as cultivation, (benevolent) colonisation, and worship (Monroe, 2017).

within creation (Gen. 1:26-29). The first couple were representative as “prophet”, “priest”, and “king”.

This information intends for church to clearly make a distinction between creator and creature, and to understand special creation as the pinnacle sub-category of creation. It also intends for the church to recognise a relation between creator and creation. Special revelation, distilled into the doctrine, is used by the church to direct it towards the pre-set goal of ultimate Christoformity: liberation, sanctification, and glorification. The doctrine, in service to Him, is essentially concerned with the transmission and interpretation of special revelation regarding the nature and origin of the creation, in propositional form. The doctrine of creation acts to establish, maintain, and restore stability in the church.

The doctrine clearly communicates truth about what we should believe about the nature and origin of creation: the right opinions to hold to regarding both the cybernated and cybernator. It is also clearly communicating spirituality about what we should value, the right orientation of our hearts towards the triune God over the creation. Lastly, it clearly communicates existential and practical issues about how we should live, the right practices of life with and for the creation, with the deeper purpose of serving the will of the triune God within creation. The doctrine infers intelligent design since it is information from an intelligent source. As a servant of the word of God, it exhibits the properties of information (contingency, complexity, and specification) in propositional form.

The special revelation truth found in the doctrine was not the result of an automatic (unintelligent) process. Rather, it was produced in history by the triune God and church under his purposeful direction. It is too complex and orderly to have been produced by chance. A way to understand this is to survey the global ideas concerning the nature and origin of creation, found in the mythologies and religions of all cultures. Our doctrine is complex and has not developed by accident. For example, the Christian worldview when compared to competing worldviews is composed of more propositions as well as these propositions being highly integrated and interdependent³¹⁰. Lastly, the doctrine withstands scrutiny since it was clearly the product of intelligence which exhibits patterns.

³¹⁰ It should also be noted that it is not unique since the New Testament likewise attributes doctrines to malevolent agencies (“the doctrines of demons” in 1 Tim. 4:1) and strongholds are brought down with counter-argumentation (2 Cor. 10:5).

5.6.2 Doctrine of creation: Feedback

We already discussed how divine-human communion of the triune God with special creation, are taught in, experienced through, inferred from, and required to produce the written word of God. Sometimes this feedback is confessional or devotional and sometimes it is apologetic or evangelistic. Nevertheless, a communication cycle has been established. The doctrine likewise exists in a situation of divine-human feedback with church. Over the history of biblical exegesis and creeds, there is an ongoing “conversation” with the text of Genesis 1-2 and related references (Psa. 19:1-4) in Scripture. Church (indwelt by the Holy Spirit) processes the data in the text, prayerfully, and articulates responses in various forms of communication to the creator and to the creation. It is regulated by feedforward and feedback mechanisms found in the doctrine. Doctrinal feedback is a strategy that allows church to adjust to unexpected worldview disturbances. It is based on actual rather than expected performance of church. It is actuated by propositional errors (that is, deception) in church and it corrects a deteriorating church, bringing life and renewal.

5.6.2.1 Feedforward

Doctrinal feedforward is anticipatory which means it produces a divinely predicted and divinely desired state in the future of church. The living system (church) is adjusted (that is, sanctified) to a future state which does not exist yet: liberty³¹¹, holiness, and glory – Christoformity. This occurs before an event occurs. The triune God prepares church for future possible outcomes. The way He prepares his church is by providing propositional information about her expected behaviour (that is, orthodoxy leading to orthopraxy). From there He simulates the actual processes. The doctrine prepares church for the eschaton, the final judgement to come. Considering this impending outcome for all creation, church must live in a way that worships the creator as transcendent and not the creation, without neglecting the two immanent divine missions.

For this reason, doctrinal feedforward is divinely goal-directed or teleological for church. The divine goal (worship the creator and not creation) is built into the doctrine which transforms special revelation about predicted futures (prophecy: foretelling of the eschaton and

³¹¹ Douglas and Tenney (1989:348) define “Christian liberty” not in external freedom but in deliverance from the bondage of sin and its consequent inner corruption (John 8:34-36 and Rom. 6:20-22). This spiritual freedom is a product of the Holy Spirit’s regenerating work which is always related to his presence (2 Cor. 3:17). Through sonship we receive a sense of freedom (Rom. 8:15-16). It is the Gospel message which reveals and offers this liberty through regeneration, sanctification, and glorification.

judgement to come) into changes in the state of the present system (prophecy: forthtelling to church to live a life of worship of creator and not creation).

5.6.2.2 Negative feedback

Negative feedback in church restores the church's theological worldview to orthodoxy by correcting sinful deviations regarding the nature and origin of creation to re-align with the predetermined goal of Christoformity. If church does not have negative divine feedback her theological worldview stability disappears. In other words, without negative divine feedback the Church becomes unstable. The way this instability manifests is that the boundaries between the church's Christian theism worldview in propositional form (the creation has a divine origin and must be distinguished from the creator) and its relevant environment (the world of competing theological worldviews in propositions which say otherwise) start to disappear. Once they completely disappear the church's Christian theism worldview will cease to exist, and her doctrine will be indistinguishable from the world's (that is, the environment of society and culture that surrounds Christians (Rom.12:2)).

Negative feedback opposes the worldview propositions produced by a diverging church. As the Christian theism worldview is perfected (by being corrected and stabilised) there will be less output that can be termed 'heterodox'. The doctrine provides negative feedback in propositional form to assist us when our 'head', 'heart', and 'hands' are producing heterodoxy, 'heterokardia', and 'heteropraxy'. It will correct the 'head' when it is not believing truth and believing lies. It will thus redirect us from heterodoxy to orthodoxy concerning the origin, maintenance, and future state of creation. It will correct the 'heart' when it is not valuing proper spirituality and valuing things of the flesh (that is, worshipping the creation rather than the creator). It will thus redirect us from 'heterokardia to orthokardia. It will correct the 'hands' when they are not behaving properly (that is, prioritising the creation over the creator). It will thus redirect us from 'heteropraxy' to orthopraxy.

5.6.2.3 Positive feedback

Positive feedback is temporary and results in a 'runaway' effect. Before the process explodes and destroys the whole church the self-accelerating loop is usually halted. If the church completely is given over to sinful worshipping of creation, resulting in an increasingly deteriorating situation. A possible example here can be found in Revelation 2:5 where the Lord Jesus Christ highlights how far the church in Ephesus has fallen and threatens to 'remove your lampstand' - which can be understood as permanently disbanding the congregation

(Gregg, 2013:95). In this case the loop can be halted should the hearers respond as they should - by repenting and returning to their 'first love'.

5.6.3 Doctrine of creation: Control (Lordship or divine shepherding)

As mentioned in the previous chapter, benevolent control of all creation is explained and accomplished through the written word of God as it is administered. We called this authoritative divine direction. The doctrine is a means of benevolent control (Lordship or divine shepherding) for the church, through divine and human means. By knowing the truth of the origin, maintenance, and final state of all creation, church can properly worship the uncybernated cybernator and not worship the cybernated creation (which would be idolatry). Furthermore, the *imago dei* in its various forms can be properly empowered to achieve representative governance through sub-cybernation of creation. Lordship or divine shepherding in the doctrine can be defined as,

the divine goal-directed influence toward a predetermined divine end of the orthodox Christian theological worldview in propositional form with a continuous comparison of the current state of the church's theological worldview to the future goal of Christoformity (liberation, sanctification, and glorification).

In other words, the doctrine is divine shepherding, or God's benevolent guiding influence upon, and control of the Church's theological worldview concerning the origin, maintenance, and final state of creation. Part of the process of Christoformity (liberation, sanctification, and glorification) is an increasingly orthodox theological worldview, in propositional form, establishing the creator-creature divide without neglecting the relation.

The doctrine is divinely goal-directed as it makes sure that the church is conformed to the truth of, has an appropriate spiritual attitude towards, and engages in practical activity with and for all creation. The doctrine influences what church believes about, appropriately values in, and how it lives in and toward all creation. The doctrine has the purpose of propositionally establishing right opinions regarding, hearts oriented towards the creator rather than, and lives submitted in stewardship to, all creation. The method of this liberation, sanctification, and glorification is edification which comes by the written word of God communicated in propositional form through the doctrine. We are edified as we properly learn of the origin, maintenance, and final state of the creation: establishing the creator-creature divide without neglecting the relation.

The doctrine is a theological worldview propositions control system for church. The primary purpose of divine shepherding through the doctrine is to influence the church's theological worldview in propositional form as a programmatic 'guide'. Divinely shepherding the theological worldview of the church is not inherent. Rather, it is the goal-directed divine influence upon the church's Christian theism worldview, in propositional form. Therefore, worldview shepherding is:

1. Distillation into the doctrine of creation.
2. Dissemination of the doctrine of creation.
3. Confession of the doctrine of creation.
4. Actualisation of the doctrine of creation.

A divine theological worldview propositional program is defined as, "The coded or prearranged theological worldview proposition that controls the process of Church liberation, sanctification, and glorification, leading it toward the given end of real redemption"³¹² or lytrosis (Muller, 2017:206). All of this depends on an initial and continuous engrafting into Christ – 'standing in Him' and 'being in Him' by mystical union (Muller, 2017:173). Ontological union with Christ (the baptism of the Holy Spirit) is communicated symbolically through water baptism (Letham, 1993:81). The teleonomic process of Christoformity (liberation, sanctification, and glorification) is guided by a teaching program: the church's dogmatic theology. Therefore, worldview adaptation and development require continuous reprogramming. The reprogramming is by means of divine shepherding through the influence of the doctrine of creation on the Christian theism worldview, in propositional form.

Table 29 Cybernetics and doctrine of creation

Cybernetics	Doctrine of creation
1. Information	Special revelation regarding origin, maintenance, and future of creation.
2. Feedback	Divine-human communication regarding creation.
3. Control	Lordship or divine shepherding regarding creator-creature distinction and relation.

³¹² This is the final and real redemption distinguished from forensic justification in Rom. 1:17 (Muller, 2017:140).

5.7 Doctrine of creation: Measures of performance

Since the doctrine is cybernetic, it continually measures the performance of the special creations (that is, the original, perfect, and corporate *imago dei*). The triune God regulates all creation by using the following three measures of performance: effectiveness, efficiency, and efficacy. Since the outcome of all creation is to glorify the triune God, all of these are measuring glorification. The ascended word of God measures all three performances of all creation by being the cybernetic influence serving the glorification of the triune God, the uncybernated cybernator.

5.7.1 Effective glorification

This measures the extent of the glorious transformation of all creation. By communicating the truth of the creator-creature distinction and relation, the doctrine (which teaches the origin, maintenance, and final state), the triune God guarantees that all creation effectively glorifies Him. This is particularly within the special creations through orthodoxy, orthokardia, and orthopraxy. Since sin and death are ineffective means of glorifying the triune God, He seeks to minimise their presence, and effects in all creation, through the divine missions.

5.7.2 Efficient glorification

This measures the extent of the glorious transformation of all creation versus the cost. By communicating the truth of the creator-creature distinction and relation, the doctrine (which teaches the origin, maintenance, and final state), is how triune God guarantees that all creation efficiently glorifies Him. This is particularly within the special creations through orthodoxy, orthokardia, and orthopraxy. Since sin and death are inefficient means of glorifying the triune God, He seeks to minimise their presence, and effects in all creation, through the divine missions.

5.7.3 Efficacious glorification

The higher-level system to creation is the ascended word of God (since Jesus Christ has a human nature, He is a composite system). Through the doctrine (which teaches the origin, maintenance, and final state of creation), the triune God guarantees that all creation efficaciously glorifies Him by accomplishing orthodoxy, orthokardia, and orthopraxy, to the glory of the ascended personal word of God. Since sin and death are inefficacious means of glory, the triune God seeks to minimise their presence and effect in the creation through the divine missions.

Table 30 Measures of performance and doctrine of creation

Measures of performance	Doctrine of creation
1. Effectiveness	Communicates truth concerning all created being.
2. Efficiency	Communicates truth concerning all created being, at low-cost.
3. Efficacy	Communicates truth concerning all created being, to the glory of God.

5.8 Doctrine of creation: General control problems

Since the doctrine is cybernetic, it solves general control problems of all creation. As an embedded control, the doctrine serves the triune God, assisting in solving the three general control problems: existence, obedience, and transformation. All these outcomes are understood as glorification.

5.8.1 Existence of church

The doctrine helps birth and maintain the orderly internal structure of church, by resisting the disorder from deceit and heresy in the form of competing worldview propositions, concerning the origin, maintenance, and final state of creation. It forms and nurtures truth, spirituality, and practices in church. Through the doctrine, the triune God solves the general problem of existence of church. By existing, church glorifies the ascended word of God.

5.8.2 Obedience of church

The doctrine serves the triune God in completing the goal of truth formation in the church, despite the surrounding milieu of competing worldviews. It solves the problems of wrong opinions, wrong-heartedness, and wrong life practices. Through the doctrine, the triune God solves the general problem of obedience of church. By obeying, church glorifies the ascended word of God.

5.8.3 Transformation or metamorphosis of church

The doctrine serves the triune God in transforming church, by removing unrighteous goals and preserving righteous ones. Unrighteous goals are those that are not in alignment with the will of the triune God whereas righteous goals are. Through the doctrine, He guarantees church

(and all creation³¹³) will be glorified. This transformation of church glorifies the ascended word of God.³¹⁴

Table 31 General control problems and doctrine of creation

General control problems	Doctrine of creation
1. Being	Births church through truth concerning all created being.
2. Behaving	Regulates church through truth concerning all created being.
3. Becoming	Transforms church through truth concerning all created being.

We have explained how the doctrine is both cybernated and cybernetic. Now that we have created both systems thinking frameworks to construct the doctrine, we can populate them with biblical and theological data. We will use the concepts and terms creation and from nothing as our foundational subjects, starting with the creational GST framework, followed by the creational cybernetics framework. We will discuss the general and special creations, which is all that exists contingently. To engineer the doctrine, we recall that there is the chain of embedded cybernation in the form of authoritative divine direction, starting with the triune God as absolute authority or auctor and then nested in created authorised/authoritative means to establish divine information, divine-human feedback, and divine control within all creation.

5.9 Creation: GST framework

To understand creation as the product of divine creative nature (Muller, 2017:227), we benefit by using the creational GST thinking framework. Now that we have created both systems thinking frameworks to construct a doctrine of creation, we can populate them with biblical and theological data. We will use the terms creation and from nothing as our primary subjects, starting with the creational GST framework. We will investigate the general and special creations.

We can apply creational GST categories to both the general and special creations. Since the term GST is derived from the Greek noun, *systema*³¹⁵, which is always composite, creational

³¹³ Creation will undergo *apokatastasis panton* – the restoration of all things, fulfilling all prophecies found in the written word of God (Muller, 2017:34).

³¹⁴ See *μετασχηματίζει* in Phil. 3:21 for metamorphosis of the church at the resurrection.

³¹⁵ See *σύστημα* – a composition or composite whole (353). I felt that the term creation simply means being that is composite and not simple. For me, simple being only has one member: Creator. Besides him there is only created being (which I believe must always be composite in some way, perhaps even angels). I think making the distinction at simple versus composite just worked really well when using

GST serves the triune God's will by conceptualising and modelling creation cataphatically, the positive way which is the way of eminence (*via eminentiae*). Creational GST is a distinct category of systems thinking focused on the whole creation as openness/cybernated, boundary/environed, hierarchy/nestedness, and emergence/design pattern/downward causation. Using creational GST, the creation can be described or expounded in these four major GST categories. In Genesis we have a full description of both general (1:1-25) and special (1:26-28) creations. The general creation is the creation of all contingent being, including living creatures³¹⁶. The special creation is the creation of personal, spiritual, and relational beings – Adam and Eve, the first couple³¹⁷. From this we have a summary of the creation.

5.9.1 Creation has a divine origin and is composite being (it is an open system)

To understand the divine origin of the creation, we must outline how it is cybernated, by the triune God: the divine missions of the Son, and Spirit in creation, with the inferred eternal processions. The *ousia* and *hypóstases* of the uncreated creator, the triune God, the simple cybernator, were wholly discussed in the previous chapter concerning the dogma of the triune God. General and special creations, unlike the triune God, are *meristos* or 'capable of being divided into parts'. We gain, assemble, and categorise our knowledge of creation by positive GST. Creational GST is applicable to general and special creations because they are composite substances.

In Scripture creation is considered good (Gen.1). Creation is proof of the wisdom of the triune God (Jones, 2017:158-159). It thus becomes a fundamental theological tool for other theological subjects. For example, the incarnation of the Son of God and the resurrection of the body would not be possible if creation was not considered good (Bray, 2014:79). Naugle (2017:118) notes that the creation account is divided into days 1-3 – the triune God brings form to the formless, and days 4-6 – the triune God fills the formed environments. Byl (2004:183-185) summarises the biblical data concerning the general creation:

systems thinking categories. This is why we can use cybernetics with God's divine missions without necessitating a composite God. Cybernetics does not HAVE TO be composite, like GST does. This is why both fundamental systems thinking frameworks will be needed. It is possible that this is because of how our brains work – perhaps the hemispheres – in order to assess all reality. Thus, theology truly should stimulate the whole brain and person, like nothing else.

³¹⁶ These include aquatic animals (Gen. 1:21), mammals (1:24), any animals (2:19) (Douglas & Tenney, 1989:350).

³¹⁷ In this chapter we will not delve into the debates regarding age of the earth, human descent, etc. but will focus on the text alone.

1. All things ('heaven and earth') were created by God.
2. God created freely. Creation is therefore not a necessary act of God, but a free one.
3. The world always depends on God. God's word keeps the creation in existence.
4. Creation is out of nothing. Contra pantheism and dualism – which both posit eternal matter – there is a distinction between creator and general creation.

Byl (199) thus asserts that every normal natural event has a primary divine cause and a secondary natural cause. The latter can be considered as uniform (order, pattern, and purpose) due to the trustworthiness of the creator who also loves order (1 Cor. 14:33).

5.9.2 Creation as designed: Divine order, pattern, and purpose in creation

Creation is designed. It exhibits order, pattern, and purpose³¹⁸. It is due to this perception of design that we infer a Designer, and this provides the basis for both natural theology and natural law. In *The Liturgy of Creation: Understanding Calendars in the Old Testament Context* (2019) LeFebvre describes the creation account as a 'calendar'. All calendars likewise track order, pattern, and purpose.

Creation can be described or expounded positively in the major system design categories, as being the recipient, medium, and processor of order, pattern, and purpose. Creation is the result and beneficiary of the divine cybernator and therefore contains order, pattern, and purpose. When applied to the creation, system design is concerned with order in nature, pattern in nature, and purpose in nature. Since these are repeatedly modelled for us in all designed machines, all living systems (including human beings) that will provide our scope of discussion.

5.9.2.1 Order in creation

There are transcendentals (truth, goodness, and beauty) present in creation. It is orderly since it is arranged and presented in a systematic way, with cosmogonical, cosmological and biological order³¹⁹. It is the second category of being in the creator-creature ontology. It receives this order by the creator. Imes (2023:14) notes that the first three days of creation involve "ordering" to create habitable space. Creation has divine order cosmologically in the

³¹⁸ For example, the sun, moon, stars determine times and seasons (Gen. 1:14, Job 38:33, Jer. 31:35) (Douglas & Tenney, 1989:570).

³¹⁹ Stephen Meyer (2023:7) lists the three major scientific discoveries that indicate divine origin of creation as: 1. The "Big Bang"; 2. Fine-tuning of the Universe; and 3. Biological complexity.

origin and fine-tuning of the universe, and biologically: DNA in all living cells. Together these infer an orderly creator, and they provide natural order: the creation has the potential to bring natural order to humanity (Rom. 2:15), reducing disorder in human society (14). As Bray (2014:79) notes: “Jews and Christians also shared the belief that there is an order in creation. The world was governed by laws that had been established by God from the beginning and that remained subject to his providential control.”

The special creations (Adam and Eve, Christ’s human nature, and church) concerns spiritual, personal, and relational order in the form of humanity. *Imago dei* is created with the representation of divine order with the potential to govern with divine order and to multiply this divine order.

5.9.2.2 Pattern in creation

The creation has cosmogonical, cosmological, and biological patterns. This pattern is caused by the uncreated creator, the triune God. Imes (2023:14) notes a pattern in the creation account showing the symmetry and order of the domains and residents. The triune God is the source of patterns in all systems, including creation. As Bray (2014:79) notes: “The cycle of the agricultural year, so important to human survival, was not arbitrary, and would continue unchanged to the end of time.”

The special creations (Adam and Eve, Christ’s human nature, and church) concerns spiritual, personal, and relational patterns in the form of humanity. The *imago dei* is created representing the divine pattern with the potential to govern with divine pattern and to multiply this divine pattern.

5.9.2.3 Purpose in creation

Unlike a goal or objective, creation’s divine purpose or final cause is relentlessly pursued but is ultimately unattainable (prior to the eschaton). The purpose of creation is the reason it exists and that is how to measure its functional success. Imes (2023:15) notes that the purpose of creation is indicated in the domains and residents of: time, air, land & food, and rest. Purpose is the reason something exists and that is how to measure its functional success. As Bray (2014:79) notes: “Nothing in the world is superfluous or disposable, even if we do not immediately see what its purpose is, and God takes care of creatures great and small”.³²⁰

³²⁰ Although it has become somewhat acceptable to view creation as replete with examples of wastefulness or so-called “junk DNA” indicating bad or no design, it should be noted that this idea has been powerfully addressed and undermined by the Discovery Institute.

The special creations (Adam and Eve, Christ's human nature, and church) concerns spiritual, personal, and relational purpose in the form of humanity. *Imago dei* is created with the representation of divine purpose with the potential to govern with divine purpose and to multiply this divine purpose. The purpose of special creation is the reason it exists and that is how to measure its functional success. Does it provide the cosmogonical, cosmological, and biological context for orthodoxy, orthokardia, and orthopraxy? By serving the ascended word of God's purpose or final cause of Christoformity: liberation, sanctification, and glorification, creation's purpose is to glorify the triune God. Creation has emergent properties or synergetic effects.

Table 32 System design and creation

System design	Creation
1. Order in creation.	Order in cosmogony, cosmology, and biology
2. Pattern in creation.	Pattern in cosmogony, cosmology, and biology
3. Purpose in creation.	Cosmogony, cosmology, and biology must glorify the Creator.

In addition to showing system-like organisation, the general and special creations (*imago dei*) are systems since they have these attributes:

5.9.2.4 Continuity of identity

This is the preservation of structure amid changes. All creation, serving the triune God, and being composite, has structure and therefore is measurable in terms of constancy over time. The general creation and special creation (*imago dei*) both have continuity of identity as they exhibit constancy over time.

5.9.2.5 Goal-directedness or teleology

To have goal-directedness or teleology, all creation is cybernated. Since creation is cybernated (the property of all composite systems) by the cybernator, it possesses teleology. General creation and special creation (*imago dei*) are both goal-directed. The goal for both is: glorification of the triune God.

Table 33 System design and creation

System design	Creation
1. Continuity of identity	One creation <i>ex nihilo</i> .

2. Preservation of structure amid changes 3. Constancy over time	
1. Goal-directedness 2. Teleology	One goal of transformation (metamorphosis).

5.9.3 Creation behaviour

Creation satisfies the three behavioural conditions of systems since it is composite. Since the general and special creation (*imago dei*) are systems, they are identifiable by 'behaviour'. Reformed Scholasticism understands the triune God in terms of *opera*, or 'works'³²¹. Creation, as well as its providential preservation, redemption, and consummation, is *opera dei ad extra*. While the triune God has inherent or natural authority over creation, He has embedded nested authorisation through two communication systems: the incarnate personal word and the spirated written word. Both agree. The Father commissioned these to serve his purpose within creation of self-glorification by means of Christoformity.

The general and special creations are cybernated and so, physically, they have interdependent and interrelated parts. Being contingent, both general and special creations are dependent on the uncreated creator, the triune God, for their existence, behaviour, and transformation. When it comes to structure, the general and special creations have the three necessary properties. These three structural properties of all systems help us distinguish between an aggregate and a system. The general and special creations (*imago dei*) are open systems and not aggregates.

1. Behaviour of each part of the creation effects the behaviour of the whole creation, for example, eco-systems.
2. Behaviour of physical parts of creation are interdependent.
3. In whatever way the physical parts of creation are defined, both influence the behaviour of the whole creation: they are not independent (which would mean no effect).

5.9.4 Creation and the GST systems thinking tradition

The systems thinking tradition of GST has always been present in theological reflection, since it is concerned with articulating and expounding on creation *via eminentiae*. Creation is the eminent open system. In engineering the doctrine of creation, we embrace these four

³²¹ As Muller (2017:19) states: "operation follows existence (or essence)".

categories as applicable to both general and special creations, *via eminentiae*. The general and special creations can be described or expounded in the major GST categories: openness/cybernated, boundary/environed, hierarchy/nestedness, and emergence/design pattern/downward causation.

5.9.4.1 Creation is an open system

The general creation is an open system. We have stated that since the creation is composite, it is an open system. It is not absolute being but is relative or partial (Muller, 2017:2). Likewise, the special creations are open systems and cybernated as spiritual, personal, and relational beings³²² (in addition to having 'flesh': the physical cybernation of the origin of the universe, the fine-tuning, and biological negentropic human DNA). Adam and Eve, Jesus Christ's human nature, and the church are all composite and physical. But not merely physical. They are also spiritual, personal, and relational.

5.9.4.2 Creation has a boundary/environed

Why identify creation's boundary/environed? Without identifying creation's boundary/environed, it is impossible to epistemically establish, maintain, and develop the creator-creature distinction. All creation has an infinite environment: the uncreated creator. Conforming to our "*ab intra*" and "*ab extra*" categories (Muller, 2017:2), creation has a boundary. Unlike the uncreated creator, there is a defined perimeter around it: temporal, spatial, etc. Likewise, the special creations, as spiritual, personal, and relational beings, have boundaries of rational soul in flesh, subject to the origin, fine-tuning, and biological negentropy found in all creation. Adam and Eve, Jesus Christ's human nature, and the church are thus all eternally³²³ enfleshed.

5.9.4.3 Creation is in a hierarchy/nestedness

The system of creation is a supersystem and a subsystem. It is part-of-whole and whole-with-parts. Likewise, the special creations, as spiritual, personal, and relational beings, are a supersystem and subsystem found in creation. Adam and Eve, Jesus Christ's human nature,

³²² Douglas and Tenney (1989:163) Adam was made from "dust" (1 Cor. 15:47-49) and this provides the Old Testament theme of "from dust to dust" (Gen. 2:7; 3:19; Job 4:19; 17:16), indicating our contingency to the Triune God while we are alive. Nevertheless, although we are dust we are not merely dust. To assert the latter is reductionism whereas the Genesis account is holistic.

³²³ Muller (2017:18) defines *aeviternity* as a distinct eternity from the triune God's since it has an origin in time.

and church are all supersystems and subsystems. Underneath and above all created systems, is the simple uncybernated cybernator.

5.9.4.4 Creation is emergent/design patterned/downward caused

The creation is not pure actuality, so its performance is continually measured by the uncybernated cybernator, the uncreated creator, the triune God. Within the creation these categories are not actualised but are in a state of potentiality. Since the creation is material and thus cybernated by the cybernator this guarantees the continual sustained existence, behaviour, and transformation³²⁴ by the cybernator of both general and special creations. The cybernator continually causes the creation to exist. This is known as *creatio continuata*³²⁵. He not only brought the universe into being but also preserves it in its temporality and so when viewed from eternity (Muller, 2017:345): there is but one act of God, who eternally wills the existence of the created order. Therefore, creation possesses essential abaliety (existence from another) (2). The special creations³²⁶, as spiritual, personal, and relational beings, likewise have continued existence from another, with emergent properties. Adam and Eve, Jesus Christ's human nature, and church changed, developed, learned, and grew.

5.9.5 Creation and Skyttner's 10 irreducible properties of open systems

Now that we have given a broad overview of GST properties that are applicable to creation, we can focus on more detail. General creation and the special creations are all open systems cybernated by the cybernator. Using Skyttner's 10 irreducible properties of systems, we can summarise them into 10 irreducible conceptual principles applicable to general and special creations.

5.9.5.1 Interrelated and interdependent parts

Confessing that "God is one" is different to confessing that "creation is one..."³²⁷. The former confesses divine unity and simplicity, and the latter confesses composite unity-in-diversity. General creation is composed of 'parts'. We use unidirectional dependence or contingency, to

³²⁴ Edgar (2016:8) notes that the cultural mandate to fill the earth and subdue it includes an eschatological outlook of progression.

³²⁵ The culmination of all creation is what is found in "eschatology" – the doctrine of last things: the old universe will be regenerated. Those with resurrected bodies will live with the triune God in a regenerated universe, from which heaven is not separated (Douglas & Tenney, 1989:184). Nevertheless, as Beale notes, the apostolic band knew they were already living in the end-times (2016:4).

³²⁶ They are characterised by passive potency (272) which needs to be activated and fulfilled to reach potential and perfection.

³²⁷ Or "Church is one" which is true only due to the Holy Spirit baptism – "the hallmark of Christian unity in Jesus Christ" (Miller, 2021:5).

describe creation's (and its myriad parts') whole relationship to the triune God. The special creations are spiritual, personal, and relational. Since we are beings of rational soul and flesh, we are forever composite: made of interrelated and interdependent parts (except after death and before resurrection). The human body (flesh) is composed of interrelated and interdependent parts, subject to the laws of all creation. Adam and Eve, Christ's human nature, and church are all composed of parts that are interrelated and interdependent, internally. In addition to this, we are potentially interrelated and interdependent in human society.

5.9.5.2 Holism

Holism is the preferred approach to prioritising understanding the 'whole-and-parts' before getting lost in the minutiae of the 'parts' in reductionistic isolation. Only divine simplicity is not in the category of 'whole-and-parts'. This 'big picture' attitude is beneficial epistemically when describing all systems. Since creation is composed of parts, we can think of it as a 'whole'. Creation is not beyond the total grasp of human knowledge and so we can gain a holistic understanding of it. 'whole-and-parts' thinking is appropriate for composite objects, especially valuable for understanding open systems like creation. Likewise, the special creations are understood primarily as 'whole-and-parts': 'whole-and-parts' persons (rational soul and flesh); 'whole-and-parts' natures (hypostatic union); and 'whole-and-parts' communities (one body with many members) before we seek to analyse the respective components³²⁸. Reductionism would see humans, Jesus Christ's human nature, and church as 'merely' this or 'merely' that.

5.9.5.3 Teleological

Creation has a divine purpose and goal. While the triune God is pure or perfect actualisation, creation has potential and thus, like all finite things, is mutable (Muller, 2017:226). Likewise, the special creations have the divine goal and purpose to model the triune God within the creation. This modelling will represent and demonstrate divine order, divine pattern, and divine purpose. It will likewise model godly being, godly behaviour, and becoming increasingly godly. It will seek to bring divine order, divine pattern, and divine purpose in creation. Adam and Eve had the divine mission of controlling living creatures and subduing the earth (cultural mandate), Jesus Christ had the divine mission of redemption through and mediation through the *munus triplex* (atonement³²⁹), and the church has the divine mission of discipling the nations (The Great Commission) which Williams (2003:168) explains as the natural

³²⁸ For example, the debate between dichotomy (spirit/soul and body) and trichotomy (spirit, soul, and body) are secondary to the doctrine of the *imago dei*.

³²⁹ As Bray (2014:439) notes: "Because of man's sin, there is an alienation between him and God that can be taken away only by an act of reconciliation, which is the root meaning of the word "atonement.""

continuation of Christ's prophetic role in the redeemed community³³⁰. These missions are teleological divine missions to glorify the triune God.

5.9.5.4 Transformation

Since the creation must have some form of a created boundary (origin in space-time, fine-tuning for regularity, and biological constraints) it has a divine environment. This means it is being transformed. Likewise, the special creations transform into the glorified Image of God. Adam and Eve were hindered from their divinely intended transformation by falling into sin. Jesus Christ succeeded in his transformation by being obedient to death, being resurrected and glorified, and ascending³³¹. The church transforms as it is sanctified by the word and the Spirit and finally, at its adoption, it is resurrected into glory. Storms (2015:351) summarises:

For the Christian, then, death is not to be feared. For we know that whatever illness or debilitation we experience now, whatever degree of suffering or hardship we must face, there is promised to us by the Spirit a glorified, Christ-like, transformed and utterly eternal abode, a body in which there is no disease, no pain, no deprivation, and no decay.

5.9.5.5 Inputs and outputs

Again, since creation has a boundary, it receives divine inputs and transforms them into outputs. Creation therefore has throughput. Likewise, the special creations have uncreated (divine) but also created inputs which they transform into outputs. Adam and Eve had divine inputs (the triune God's influencing presence and words) and created inputs (according to Gen. 1:29: every seed-bearing plant and fruit tree is good for food). Jesus Christ had divine inputs (the divine missions of the *Logos* and the Spirit cybernated Him) and created inputs (he ate, had interactions with creation, operated as any created being). The church has divine and divine-human inputs (the authoritative divine direction of Jesus Christ in the flesh, then the authoritative apostolic band, then the baptism of the Spirit at Pentecost, and the continuing written word of God) and created inputs (studied the apostolic teachings, fellowshiped, prayed, and ate food and Lords Supper together (Acts 2:42)).

³³⁰ In *The Prophet and his Message* (2003), Williams outlines the repeating pattern of prophetic representation in Scripture (whether Israel, Jesus, or the Church) as manifesting verbally, behaviourally, affectively, and completely.

³³¹ The transfiguration is a pre-resurrection temporary transformation into glory.

5.9.5.6 Negentropic

The economic trinity, being cybernetic, uses information as the means to bring negentropy in creation. By communicating information, establishing feedback cycles, and exercising control, He brings order in the physical world. These physical and informational means are established through natural laws in creation. These provide informational negentropy: order, pattern, and purpose. Likewise, the special creations are negentropic and informational. The cosmological and biological laws of nature brought negentropy to Adam and Eve, Jesus Christ's human nature, and church. They, in turn, as divine representatives, bring spiritual, personal, and relational divine order to the creation³³².

5.9.5.7 Regulated (cybernated or controlled)

Creation is cybernated by the uncybernated cybernator. Therefore, it is regulated or controlled by the cosmological and biological laws and has potential that can be actualised. Likewise, the special creations are regulated physically by the cosmological and biological laws. The original, perfect, and corporate *imago dei* all have spiritual cybernation (souls and flesh). Jesus Christ's human nature (by anointing) and church (through baptism of the Holy Spirit) are also cybernated by the divine missions of the *Logos* and of the Spirit³³³.

5.9.5.8 Hierarchy/nestedness

As stated previously, creation is an integrated open system. Since it is a system, it is likewise a supersystem and subsystem. It is a whole-with-parts and part-of-whole. Likewise, the special creations are supersystems and subsystems. Adam and Eve were the pinnacle of creation and made in the image and likeness of the uncreated creator being embedded in creation. Since they are composite systems, they are made of smaller spiritual, personal, and relational systems (that is, rational soul and body of flesh). The same is true of Jesus Christ and church, both are embedded in creation, made in the image of the uncreated creator, and are composed of these smaller systems. In addition to this, the head of the church body is the ascended Jesus Christ (Eph. 5:23). Church is likewise composed of individual "members" (Rom. 12:5).

³³² We will look at this in more detail in the doctrine of creation: cybernetic framework.

³³³ It should be noted that the church is sub-cybernated by "shepherds" given by the triune God. According to Douglas and Tenney (1989:422) this occupation of the shepherd was to "tend, feed, guard flock". Metaphorically the triune God, the uncybernated cybernator, is shepherd of his flock (Gen. 48:15, John 10, and Rev. 7:17).

5.9.5.9 Differentiation

Creation is functionally differentiated as all open systems are. It has functional division and co-ordination of labour among the parts. As we see in Genesis, the first three days are 'forming' environments of existence and days four to six are 'filling' those environments with maximum variety. Likewise, the special creations (Adam and Eve, Jesus Christ's human nature, and church) have rational souls and bodies of flesh that are differentiated (so much so, that they sometimes compete for control, Col. 3:9-11). These, in turn, have differentiation within them, both psychologically and physically. The Holy Spirit distributes diversities of gifts to the church, and the Lord Jesus distributes varieties of ministries (1 Cor. 12).

5.9.5.10 Equifinality and multifinality

As an open system, creation has equally valid alternative ways of attaining the same objectives of creator and creation from different initial conditions (convergence) or, from a given initial state, obtain different, and mutually exclusive, creator and creation objectives (divergence). Likewise, the special creations have equifinality and multifinality: equally valid alternative ways of attaining the same creator and special creation objectives of glorification from different initial conditions (divine-human convergence or theosis) or, from a given initial state, obtain different, and mutually exclusive, creator and special creations objectives (divine-human divergence or damnation).

5.10 Special creations: *Imago dei* and measures of performance

Asking 'who?' and asking 'what?' are two different questions with two different answers. Much Christological and trinitarian heresy came by simply confusing these questions and answers as early Christians wrestled with Hellenistic concepts of being and personhood. There are three special creations cybernated by the uncypernated cybernator: original, perfect, and corporate. The special creations (starting with Adam and Eve³³⁴) contain all ordering cosmological and biological properties of the general creation, plus additional attributes since we are divinely endowed with representative sub-cybernetic functions within creation. Christ's human nature is the perfect *imago dei* (Col. 1:15)³³⁵ and church is the corporate *imago dei* (Col. 1:18), both are cybernated by the *Logos* and the Spirit (1 Cor. 12:12-27). The special creations (the image of God), as the pinnacles of creation, are measured in terms of

³³⁴ Greidanus (2018:32) calls humanity "the crown of God's creation".

³³⁵ Bates (2017:157) observes that the incarnate word of God is the way that God, who is transcendent, becomes immanent in Creation.

effectiveness, efficiency, and efficacy in bringing the cybernator glory through faithful submission. Each special creation submits in their own way.

5.10.1 Anthropology: Divine effectiveness, efficiency, and efficacy of the original imago dei

Adam and Eve, the original image of God, as the pinnacle of creation, is measured in terms of effectiveness, efficiency, and efficacy in bringing the cybernator glory through faithfully submitting to the cultural mandate. Their performance was to be measured physically as well as spiritually, personally, and relationally, as collaborative spirit-stewards of creation. The triune God measured their effectiveness, efficiency, and efficacy as glorifying representatives. To be effective, efficient, and efficacious, they were specially endowed with a sinless rational soul and a human body uniquely sanctified for the task. Sinlessness guaranteed their maximum effectiveness, efficiency, and efficacy.

5.10.2 Christology: Divine effectiveness, efficiency, and efficacy of the perfect imago dei

Jesus Christ's human nature also includes divine measures of performance. His performance was to be measured physically as well as spiritually, personally, and relationally, as the collaborative spirit-steward of Israel and creation. The triune God measured his effectiveness, efficiency, and efficacy as glorifying human representative. The perfect image of God (Jesus Christ), as the sinless pinnacle of creation, is measured in terms of effectiveness, efficiency, and efficacy in bringing the cybernator glory through faithfully submitting to the atonement. The perfect image of God, as the pioneer of the new creation, was measured in terms of effectiveness, efficiency, and efficacy, in bringing the cybernator glory through faithfully submitting to the atonement. To be effective, efficient, and efficacious He was specially endowed with a sinless rational soul and a human body uniquely sanctified for the task. Sinlessness guaranteed his maximum effectiveness, efficiency, and efficacy.

5.10.3 Ecclesiology: divine effectiveness, efficiency, and efficacy of the corporate imago dei

The church includes divine measures of performance. Our performance is to be measured physically as well as spiritually, personally, and relationally, as collaborative spirit-stewards of church and creation. The triune God measures our effectiveness, efficiency, and efficacy as glorifying community of individual representative glorifiers. The corporate image of God, as the body of Christ, is measured in terms of effectiveness, efficiency, and efficacy, in bringing the cybernator glory through faithfully submitting to the Great Commission. To be effective we are specially endowed with a new heart uniquely sanctified for the task of being a living

sacrifice. A life of progressive holiness, as we are sanctified, will guarantee our maximum effectiveness, efficiency, and efficacy.

Table 34 Measures of performance and special creations

Measures of performance	Anthropology	Christology	Ecclesiology
1. Effectiveness	Mission to bring glory through Cultural Mandate.	Mission to bring glory through atonement.	Mission to bring glory through Great Commission.
2. Efficiency	Glory through faith at minimum cost.	Glory through atonement at minimum cost.	Glory through unity at minimum cost.
3. Efficacy	Faith to the glory of God through original sinlessness.	Faith to the glory of God through hypostatic union.	Faith to the glory of God through new heart.

5.11 Special creations: *Imago dei* and general control problems

The special creations (the image of God), as the pinnacles of creation, solve the general control problems of 'being', 'behaving', and 'becoming' in bringing the cybernator glory through faithful submission and representation. Each special creation submits and represents faithfully in their own way.

5.11.1 Anthropology: Being, behaving as, and becoming the original imago dei

Adam and Eve, the original image of God, as the pinnacle of creation, solve the general problems of 'being', 'behaving', and 'becoming' glorifying representatives of the cybernator through faithfully submitting to the cultural mandate. Their 'general control problem' was to be "solved" physically as well as spiritually, personally, and relationally, as representative spirit-stewards of creation. The original image of God, as the pinnacle of creation, solved the general problems of being, behaving as, and becoming the image of God, in bringing the cybernator glory by faithfully submitting to the cultural mandate. To be, behave as, and become, the image of God they were specially endowed with a sinless rational soul and a human body uniquely sanctified. By being, behaving as, and becoming, sinless spiritual, personal, and relational representatives, they were created to faithfully represent the glorious triune God in creation.

5.11.2 Christology: Being, behaving as, and becoming the perfect imago dei

Jesus Christ, the perfect image of God, as the pioneer of the new creation, solves the general problems of 'being', 'behaving as', and 'becoming' glorifying representatives of the cybernator

through faithfully submitting to the atonement. Jesus's 'general problem' was to be 'solved' physically as well as spiritually, personally, and relationally, as He is the representative spirit-steward of the new creation. Jesus Christ, as the pioneer of the new creation, solved the general problems of being, behaving as, and becoming the perfect image of God, in bringing the cybernator glory through by faithfully submitting to the atonement. To be the perfect image of God, He was specially endowed with a sinless rational soul in hypostatic union and a human body uniquely sanctified. By being the sinless spiritual, personal, and relational divine representative, He was created to faithfully represent the glorious triune God in creation, by sinless sacrifice, as prophet³³⁶, priest, and king.

Vidu (2021:82), quoting Hebrews 2:10 and 5:8 highlights that even Jesus Christ learned obedience through the process of suffering, his human nature growing in wisdom and becoming increasingly perfected. This does not qualify Him as Son but is the natural process of the Son when he has a human nature (83). The eternal procession of the Son in the divine mission of the incarnation reveals the taxis or order of the ontological trinity in human form, which appears to us as "obedience to the Father" (84). By being the sinless spiritual, personal, and relational divine representative, He was created to faithfully represent the glorious triune God in creation, through transforming glorification, and ascension.

5.11.3 Ecclesiology: Being, behaving as, and becoming the corporate imago dei

Church, the corporate image of God, as the body of Christ, solves the general problems of 'being', 'behaving as', and 'becoming' glorifying representatives of the cybernator through faithfully submitting to the Great Commission. Church's 'general control problem' was to be solved' physically as well as spiritually, personally, and relationally, as we are the representative spirit-steward of the ascended Christ. Church, as the Body of Christ, solves the general problems of being, behaving as, and becoming the corporate image of God, in bringing the cybernator glory by faithfully submitting to the Great Commission, as the living sacrifice. To be the corporate image of God we were specially endowed with a new heart and the indwelling Holy Spirit, and a human body uniquely sanctified. By being the corporate spiritual, personal, and relational divine representative, we were re-created to faithfully represent the glorious, ascended Christ in creation, as the living sacrifice.

³³⁶ Williams notes that Jesus as prophet represents God in words and actions (2003:146-147) yet through incarnation He perfectly represents humanity (151).

Table 35 General control problems and special creations

General control problems	Anthropology	Christology	Ecclesiology
1. Being	Sacrificial servants.	Atoning sacrifice.	A living sacrifice.
2. Behaving	Submitting to the word of God to fulfil cultural mandate.	Submitting to the will of God to fulfil the atonement.	Submitting to the will of God as communicated in the written word of God to accomplish the great commission.
3. Becoming	Increasingly glorious image-bearers.	Glorified perfect image-bearer.	Increasingly sanctified, liberated, and glorious image-bearing community.

5.12 Creation is an integrated system

From this *via eminentiae* overview of general and special creations as open systems, we conclude with the threefold GST theme true of all cybernated open systems:

5.12.1 Independence

Absolute ontological independence is a property of the triune God alone, “He is completely independent of his creation” (Wells, 2012:9). Neither the general creation nor the special creations are ontologically independent. Adam and Eve, Jesus Christ, and church are commanded to never be independent of the triune God³³⁷.

5.12.2 Unidirectional dependence

Absolute ontological dependence must be upon the triune God alone, “The universe was made by him, is providentially sustained by him, and is utterly dependent on him” (Wells, 2012:9). Both the general creation and special creations are dependent on the triune God for their being. Adam and Eve, Jesus Christ, and church are commanded to live lives of absolute dependence upon the triune God³³⁸.

³³⁷ Besides the sinless Jesus Christ, the others can sinfully rebel or refuse this dependence through disobedience and unrighteousness.

³³⁸ Besides the sinless Jesus Christ, the others can sinfully deny or undermine this dependence through disobedience and unrighteousness.

5.12.3 Interdependence

Since general creation is composite, ideas of 'interdependence' internal to its material being are appropriate. The special creations, being composites of rational souls and physical bodies are commanded to be interdependent with all other created persons (love your neighbour as yourself). Adam and Eve, Jesus Christ, and church are commanded to love others.³³⁹

5.13 Creation: Cybernetics framework

The uncybernated cybernator is cybernetic and so information exists in the creation in the origin, fine-tuning, and DNA of complex living systems. Data within living creatures provides evidence of the existence of the intelligent, originating uncybernated cybernator, the uncreated creator. Biological information is "obeyed" in creation. Since the triune God is cybernetic, so is *imago dei*. Just as information is the measure of order in an open system, the special creations, the *imago dei*, the pinnacle of the creation, are the divine means of bringing spiritual, personal, and relational higher-level divine order, divine pattern, and divine purpose to creation. Through *imago dei* the cybernator creates and maintains stability in creation. Creation is not only cybernated but, through the special creations, it is cybernetic.

5.13.1 *Opera dei*

Opera dei refers to the creation as well as its providential preservation (Muller, 2017:244) or conservation (77). This comes in two sub-categories: *opera dei ad extra* and *opera dei ad intra*. *Opera dei ad extra* refers to the outward or external works or activity of God. Reformed Scholasticism understands the creation in terms of *opera dei ad extra*, or 'works'. Since the *opera dei ad extra* is comparable to a cybernetic system, they are identifiable by 'behaviour' in creation.

The triune God's *ad extra* works are creation, sustenance of creation, and relation to creation³⁴⁰ (Muller, 2017:244). These are ideas using creational cybernetics with reference to the nature and origin of creation. When the triune God acts externally in creation in these three ways, He is comparable to a cybernating system influencing an open system. It involves understandable concepts in creation like communication of information, feedback cycles, and control. The divine works occurred in creation – in time and space – and so, are historical. They are kinetic events and so appear to us as cybernetic activity of the triune God within

³³⁹ Besides the sinless Jesus Christ, the others can sinfully resist or undermine this interdependence through disobedience and unrighteousness.

³⁴⁰ The doctrine of double gratuity is that the triune God has exhibited a double grace in creation and redemption (Sanders, 2017:71).

creation. From this we all can naturally infer the uncreated creator (Rom. 1:20) or the 'uncybernated cybernator'. However, this natural inference is suppressible with catastrophic results (Rom. 1:21-32).

5.13.2 The cybernator and creational cybernetics

Creational cybernetics is applicable to the triune God's works in creation and to the special creations. To understand the creation within time, we are benefitted by the helpful distinctive categories within Reformed Scholasticism. Creation can be distinguished between original or 'primitive' creation³⁴¹ and the continued creation which is its providential conservation by the cybernator. The triune God reveals himself within (by and through) the creation in a cybernetic way, via the creation.

5.13.2.1 The origin of creation is divine cybernation

In the previous chapter we showed that the originator of creation is the divine cybernator, we outlined how the divine missions of the economic triune God are comparable to a cybernetic system found in creation. The triune God cybernated the origin of the creation. The Son and Spirit are the means of the creation. The special creations, since they are *imago dei*, have unique divine properties in created models – spirituality, personality, and relationality.

5.13.2.2 The continuation of creation is divine cybernation

To understand the continued creation, we must outline how the triune God is the present cybernator. To do this, we must show first acknowledge that the cybernator operates within space and time. This we have done in the previous chapter regarding the *opera dei* extra, with a focus on the divine missions of the Son and the Spirit, the 'two hands' of the economic trinity. Since the creator's works are comparable to a cybernetic system, we can perceive these cybernetic works in creation. Creation bears 'artifacts' of cybernation by an uncybernated cybernator. That is, the creation has information, feedback, and control systems present everywhere since the creator uses these logical means to cybernate creation.

The heavens declare glory of God in Ps. 19 and Rom. 10:18 (Douglas & Tenney, 1989:224). Through the creation, the triune God as creator reveals that He is cybernetic. In creation we

³⁴¹ This is the original creation by divine act, *ex nihilo* (Muller, 2017:84).

perceive cosmogonical origin, cosmological order, and biological information. Information³⁴² is a property of all creation. As the psalmist declares, the creation 'speaks':

The heavens declare the glory of God;
the sky displays his handiwork.
Day after day it speaks out;
night after night it reveals his greatness.
There is no actual speech or word,
nor is its voice literally heard.
Yet its voice echoes throughout the earth;
its words carry to the distant horizon (Psalm 19:1-4).

Parry rightly appeals to the ancient Israelite cosmological understanding of the creation being 'living' rather than 'mechanical' (2014:2-4).

5.14 Creation: Divine cybernation: information, feedback, and control in creation

Cybernetics is a distinct category of systems thinking focused on information, feedback, and control. Whereas the doctrine of creation is a system of terms concerning its nature and origin, the creation itself, being divinely cybernated is the arena for all physical cybernetic systems. Now that we have outlined how the doctrine of creation can be structured in the cybernetics system thinking tradition, we can populate the cybernetics framework with theological data concerning its origin and creation.

The systems thinking tradition of cybernetics is present in theological reflection since it is concerned with articulating and expounding on the uncreated creator's creation by using *via eminentiae*³⁴³. The open system of creation is the eminent example of a cybernated system. By *opera dei ad extra* we know the uncreated creator is the triune God. The divine source of the creation can be outlined with divine cybernetic categories which provides relative knowledge of the triune God (Muller, 2017:310) who we can understand as the 'uncybernated cybernator'. Once this is done, we have a mental model of divine cybernetics, understandable to all humans by inference or abductive reasoning. This helps us to mentally conceptualise the uncreated creator as well as providing a more detailed understanding of the cybernation of the creation by the cybernator.

³⁴² Byl (2004:90) summarises Gitt's five aspects of information: statistics, syntax, semantics, pragmatics, and apobetics.

³⁴³ Thus, this is comparable to *a posteriori* (Muller, 2017:1), from effect of divine missions to cause of eternal processions.

Creation can be described or expounded positively in the major cybernetics categories, as being the recipient, medium, and processor of information, feedback, and control. Creation is the result and beneficiary of the divine cybernator and therefore contains information, feedback, and control systems as created artifacts of divine cybernation. When applied to the creation, cybernetics is concerned with information in nature, feedback in nature, and control in nature. Since these are repeatedly modelled for us in all designed machines, all living systems (including human beings) that will provide our scope of discussion³⁴⁴.

5.14.1 Divine information in creation

Creation has information present cosmologically, in terms of the fine-tuning of the universe, and biologically: DNA in all living cells. Together, these two infer an intelligent creator and in turn provide a natural law. Creation alone has the potential to bring some natural law to humanity (Rom. 2:15), somewhat reducing disorder in human society (14). Creation contains information in physical artifacts, which always comes from an intelligent source.

5.14.2 Divine feedback in creation

Creation has physical, artifact feedback mechanisms present cosmologically in terms of the fine-tuning of the universe, and biologically in the DNA in all cells. Creation has the potential to bring natural law into humanity, resulting in a better fellowship between the triune God, humanity, and creation. We thus inherit a rudimentary feedback system through general revelation.

5.14.3 Divine control in creation

Creation is controlled cosmologically in terms of the fine-tuning of the universe, and biologically in the DNA of all cells. It also indirectly effects the special creations through the natural law. Creation has the potential to bring natural law into humanity, resulting in better self-governance, personally and socially. When humans abide by natural law, they are more moral and more ethical, and this has a positive overall effect in creation. Conversely, suppressing natural law, has a negative effect in creation.

³⁴⁴ We will not investigate the cybernetics categories of information, feedback, and control as they pertain to living systems, in detail. This is freely available to GST and cybernetics systems thinking and we accept them fully and provide here the most cursory summation. Instead, we will outline the unique case of human beings as being divinely created 'sub-cybernators' within creation, since this doctrine of human beings as *imago dei*, is of greater interest in Dogmatic Theology.

Table 36 Cybernetics and creation

Cybernetics	Creation
1. Information	Information in fine-tuning of the cosmos and DNA.
2. Feedback	Feedback mechanisms in cosmos and DNA.
3. Control	Fine-tuning of cosmos and DNA.

5.15 Special creations

In the previous chapter, having started with the economic trinity, namely, the divine missions of the Son and the Spirit, and worked back to the eternal processions of the Son and the Spirit, we summarised the inferred ontological trinity, using cybernetic systems thinking. From this we have a working definition of the triune God and can infer truths regarding the properties of the *imago dei*, who model the triune God within creation. Each of the special creations is cybernetic. Since special creations are sub-sets of the creation (all special creations are subject to biological information, feedback, and control), they are measured in terms of physical performance and solve general control problems of physical life. What makes the special creations different to the creation is that their cybernetic function is one of divine representation within creation.

The original image of God – Adam and Eve – were servants (Harmon, 2020:7-40), glorifiers (Morgan and Peterson, 2022:204-205), and shepherd-kings (Laniak, 2006:94). Likewise, the perfect image of God, Jesus Christ, was servant (Harmon, 2020:143-178), glorifier (Morgan & Peterson, 2022:206-209), and shepherd-king (Laniak, 2006:171-222). Lastly, the corporate image of God, the church, is servant (Harmon, 2020:201-222), glorifier (Morgan and Peterson, 2020:221-223) and shepherd-kings (Laniak, 2006:222). Each special creation has a cybernetic mission. We will look at each in turn.

As information is the measure of order in an open system, the *Logos* is the divine means of organising creation³⁴⁵. The *Logos* is how the communicative, relational triune God 'speaks' to us and has crossed the 'invisible boundary' in time, as a divine-human person, Jesus Christ. The incarnate Son is very much the Father communicating his own being within human form for us to fully understand Him:

the Reformed argue that Christ, as Son of God and Second Person of the Trinity, is the *imago dei invisibilis*, the image of the invisible God, and thus may be called the

³⁴⁵ Colossians 1:15-20.

essential or natural image of God... in his equality with the Father, not in the sense of his being an archetype for humanity (Muller, 2017:159).

Special revelation³⁴⁶ is divine interaction with the creation. Through divine-human agency (the personal and the written word of God), divinely revealed information is injected into the open systems of creation, Christ's human nature, and church. Divinely revealed information is thus used by the open system, whether general or special creations, to direct them toward the pre-set goal of glory³⁴⁷. Douglas & Tenney (1989:630) define word as the creative activity of the triune God. When he speaks, things are caused to exist (Gen 1 & Ps. 33:6-9). The divine cybernator uses special revelation by the *Logos* to restore or maintain stability in the present creation. The word of God, then, is the fundamental aspect of God's self-revelation and thus through his word he makes himself known. This information includes: what God is like, and what God's will is.

The triune God upholds the entire universe, is everywhere present, and saturates all of reality. What distinguishes the *Logos* from creation is that He is the source of its order and all systems within it. Whether frameworks, clockworks, cybernetic systems, open systems, or all the way up to 'transcendental systems', the *Logos* is their source and maintains them. Nevertheless, the triune God uses the means of the *Logos* – the transmission and interpretation (by humans) of divine revelation – to change disorder into order or chaos³⁴⁸ into cosmos. The two divine missions of the Son and Spirit are communicated in a way that is perceivable to humanity as "constancy over time" and "goal-directedness" and so present divine order, divine pattern, and divine purpose perceivable and understandable to us within creation, providing revealed information regarding the triune God. The *opera dei ad extra* are understandable in these categories of thought. From *opera dei ad extra* we can infer the divine order, divine pattern, and divine purpose within the ontological trinity. Likewise, all special creations, being *imago dei*, model divine order, divine pattern, and divine purpose within creation (since they are cybernated by the triune God). For this reason, they are mandated to manifest and multiply order, pattern, and purpose to creation – they are cybernetic.

³⁴⁶ It is also called *patefactio* which is a disclosure or *manifestation* (Muller, 2017:209) or a making known. *patefactio* (or *epiphania*) tends to be reserved for the self-disclosure of God in the person of Jesus Christ. This is also known as revelation or apocalypse. (255).

³⁴⁷ Douglas and Tenney (1989:223) note that in the New Testament the glory of the Lord is mentioned in John 1:14, Rom. 9:4, Luke 2:9 and John 17:22 and was passed on to the disciples. In Phil 3:21 it mentions that the church will be glorified like the Lord.

³⁴⁸ We should also note that the *Logos* is not merely cybernetic (information) because He also transforms energy and matter within creation (for example, miracles, the new creation of the cosmos, and church).

According to Douglas and Tenney there are two truths about humanity taught in the Bible: we are created by the triune God, and we are made in the image of the triune God. This image and likeness of the triune God “seems to include personality, rationality, morality and spirituality” (1989:268). This is the justification for humanity being the stewards³⁴⁹ of the earth in Genesis 1:27-28. The special creations (original, perfect, and corporate) will be summarised in terms of:

1. Cybernetic missions
2. Divine design: order, pattern, and purpose
3. Divine cybernation: information, feedback, and control

5.15.1 Cybernetic missions

We have looked at how the cybernator cybernates creation. Divine cybernetics has many outcomes, but we will focus on three that are relevant to the special creations: cultural mandate, atonement³⁵⁰, and Great Commission.

5.15.1.1 Anthropology: Cultural mandate

The mission of the original *imago dei* – the primeval “sons of God”³⁵¹ – is called the cultural mandate. Work was sanctioned before the Fall and was considered “good” (Horst, 2017). It involves everything outlined in Genesis 1:28 and has never been revoked:

1. Growth
2. Multiplication (through human reproduction)
3. Filling the earth
4. Subduing the earth³⁵²
5. Controlling all living creatures in all spheres

³⁴⁹ Douglas and Tenney (1989:423) define a *steward* as someone who is responsible for the care and management of the household (Gen. 43:19 and Luke 16:1). First Corinthians 4:1 applies it to church ministers. It also applies to Christians (1 Pet. 4:10).

³⁵⁰ The intent of the atonement reveals divine purpose or design (Letham, 1993:225).

³⁵¹ Douglas and Tenney (562) clarify that “son” refers to any offspring regardless of male or female (Gen 3:16). For example, in Daniel 5:22 it refers to descendants, generally.

³⁵² Edgar (2016:8) notes that filling and subduing automatically imply progression.

Beale and Kim (2014:29) fully explain the desired outcome of the cultural mandate:

Eden is a place of God's presence, and the place of God's presence is a place of worship. The expansion of Eden, therefore, is an expansion of worship. Worship fuels mission in Eden – bearers of the image of God reflect his presence in worship and are propelled forward in their mission to “fill the earth” with reflections of God's glory (Gen. 1:28). Worship is in fact the goal of mission in Eden, filling the earth by multiplying image bearers in the temple of God's presence who would worship and reflect God's glory to the ends of the earth.

The original image of God were commanded to fulfil the cultural mandate (Gen. 1:26-28). For this function they have the ability of human speech (Gen. 2:19-20), modelling divine communication within the creation (Gen. 1:3, 5-6, 8-11, 14-15, 20, 22, 24, 26, 28-30). They also were commanded to reproduce, which would extend the network, globally. Allberry (2012:110) also reminds us:

We have already seen from the creation account that men and women are created equal. Both are made in the image of God and share this dignity equally. Neither gender is more or less the image of God than the other. There is no inferiority of one sex and superiority of the other.

Before the fall they were perfectly cybernated internally (sinless souls) and externally (through direct fellowship with the triune God). At the fall they were tempted with the promise of autonomy or 'independent self-cybernation' – a property of the triune God alone. This would provide independence from the divine cybernation through *koinonia* with the triune God. They were modelled after the triune God, but they wanted to direct themselves and thus direct reality after themselves. This rebellion, naturally, conflicted with the desired mode of cybernation by the triune God (benevolent influence by fellowship), resulting in curses and expulsion.

Since they clearly desired to be their own sovereign self-shepherds without divine influence externally imposed upon them, they had to be expelled. They were blocked access from the life provided by the Tree of Life, and this resulted in a deteriorating situation as all people were now affected by sin and death. Part of the curse would be difficulty and complexity in representing the triune God in creation. Since the *imago dei* was damaged but not removable (being inherent), they would not be able to stop representing the triune God, but they would have frustration and difficulty. Adam and Eve's cybernetic divine mission in the form of the cultural mandate was made difficult.

Adam and Eve's human nature was created to be actively divinely cybernated and divinely cybernetic. Adam and Eve's human nature had information, feedback, and control from creation (cosmological fine-tuning and biological information). Likewise, Adam and Eve's human nature has information, feedback, and control from the triune God (the word provided them divinely revealed information, divine fellowship and feedback, and divine shepherding and control).

The original image of God was commanded to fulfil the cultural mandate (Gen. 1:26-28). For this function they have the ability for human speech (Gen. 2:19-20), modelling divine communication within the creation (Gen. 1:3, 5-6, 8-11, 14-15, 20, 22, 24, 26, 28-30). The original image of God was made as relational, personal, and spiritual beings. For this function they have the capability of relational, personal, and spiritual fellowship, modelling divine *koinonia* in creation. The original image of God was made to control living creatures and to dominate the land. For this function we have the ability of benevolent control and dominion (spirit-stewardship as servant-leaders) within creation, modelling in created form, the divine control of creation. Being made in the *imago dei* provides dignity and purpose in our work and vocation (Lindsley, 2012).

5.15.1.2 Christology: Atonement

The perfect *imago dei* has the constraints of creation and the higher-level functions of the original image of God (human communication and the cultural mandate). Romans 8:29 informs us that the restoration of the *imago dei* is provided through Jesus Christ (Lindsley, 2012). Bray (2014:52) reminds us that Jesus Christ is "the new Adam" and thus our representative. Bray (65) notes that the early Christians could see the priest-king in Jesus Christ, patterned after Melchizedek. Letham (1993:106-112) explains how Jesus Christ is our High Priest, based on the primeval order and not the Levitical order. This is redemption-atonement-mediation by the first advent and involves the *munus triplex*³⁵³:

1. Prophet³⁵⁴
2. Priest³⁵⁵

³⁵³ The threefold office, also called the *munus Christi* or "office of Christ" (225).

³⁵⁴ *Munus Propheticum* (295).

³⁵⁵ *Munus Sacerdotale* (316). Jesus Christ is also known as "*sacerdos impeccabilis*" which means the sinless and impeccable priest which requires Him to be the sinless sacrifice.

3. King³⁵⁶

All of these are concerned with divine-human mediation in distinct ways and associated with the Holy Spirit by the anointing oil. Bray (536-538) notes that the *munus triplex* was first mentioned by Eusebius, then a century later by Peter Chrysologus, then Aquinas in the Middle Ages, then Luther (though he omits “prophet”), Osiander, and Calvin. All of them were held by Jesus Christ and wholly fulfilled by Him. Within creation these have the following interrelated and interdependent functions:

1. Revelation
2. Reconciliation
3. Reign/rule

Calvin perceived the threefold office as all divine self-revelation and would function until completion. The prophetic and priestly functions would fall away, and the kingly function would be transformed into a permanent state of sovereignty. The summation of the atoning work of Christ is a holistic approach to the Scripture (Bray, 2014:535) since it was foretold in the OT and fulfilled in the NT. Banks (2020:54) notes how Christ is now both head of church and creation, continuing the mediatorial role. Thus, redemption is divine cybernation on the absolute scale:

5.15.1.2.1 Incarnation

Through incarnation as prophetic revelation, Jesus the anointed one, the word of God, provides information.³⁵⁷ “God can and has clearly communicated with us” (Sire, 2009:38). Jesus Christ showed himself to be the true and final prophet³⁵⁸ by applying the word of God to

³⁵⁶ *Munus regium*. Jesus Christ is also known as “*regnum mediatorium*”, which is his mediatorial rule (309).

³⁵⁷ This information is final revelation of God. He manifests for us in order for us to clearly learn about the mysteries of the Great Tradition: Christology (two natures, one Person); Trinity (one ousia, three hypostases); and, soteriology. As humans we require a narrative in order to glean data and meaning. God the Son provides this. Of course, his presence infers a Father Person while also assuring us that his presence is all we need to know about the Father (John 14:8-9). Also, by breathing out the Spirit on the apostolic band (John 20:22) and his teachings on the subject, we learn about the Holy Spirit to come (John 14:16), which completes our understanding of the three Persons. Also, by the *munus triplex* of prophet, priest, and king, He completes the Old Testament anointed types, models them for us as a corporate representative, and at the same time is communicating the character of the Father. The Father provides: divine revelation (to liberate, sanctify, and glorify); divine-human reconciliation; and, divine rule.

³⁵⁸ Contrast this with the concept of a false prophet who provides information intended to cause disorder to the congregation (Belcher, 2016:22-24).

contemporary issues, having the “burning social conscience” of a prophet concerned for justice and the oppressed, and looking into the future for the fulfilment of the triune God’s promises (Letham, 1993:94).

5.15.1.2.2 Atonement

Through atonement as priestly reconciliation and sacrifice, Jesus the anointed one, the lamb of God, establishes feedback. “God, in unmerited favor and great grace, has granted us the possibility of a new life, a life involving substantial healing of our alienations and restoration to fellowship with God” (40). The main function of priests is to intercede on behalf of fellow human beings in the presence of God, being their representative before the triune God (Letham, 1993:105).

5.15.1.2.3 Ascension

Through ascension as royal ruler, Jesus the Christ, the anointed one, controls the church and creation. As Sire (2009:40-41) puts it, “Our role is to respond by repentance for our wrong attitudes and acts, to accept God’s provisions and to follow Christ as Lord as well as Savior.” Jesus Christ at present exercises a mediatorial kingship, continuing what He had begun when he proclaimed the arrival of the kingdom of God/Heaven (Letham, 1993:197).

5.15.1.3 Ecclesiology: Great Commission³⁵⁹

The corporate *imago dei* has the constraints of the general creation, the higher-level functions of the original and perfect *imago dei* (human communication and the cultural mandate) as well as the Great Commission. Romans 8:29 informs us that through salvation and sanctification Christians are conformed to the Image of Jesus Christ (Lindsley, 2012). The kingship of the ascended Christ extends to church: “As a resurrection community, the church is both the locus and the bearer of salvation” (Letham, 1993:214). Letham notes that the authoritative apostolic band were the continuation of Jesus Christ’s prophetic role in the apostolic church (1993:95). Also, the community of believers are a priesthood (1993:121-123). Jacob (2018:10) sees “conformity to the image of the Son” in Romans 8:29 as individual believers being conformed to the status and function of the Son of God as ruler over all creation. Horst (2017) highlights that human flourishing in continued commitment to the cultural mandate is part of the church’s

³⁵⁹ William Edgar perceives the Great Commission as a ‘republication’ of the cultural mandate mission (Monroe, 2017).

mission. Both Israel (Ex. 4:22-23 and Isa. 54:5-6) and the church (Gal. 3:26 and 2 Cor. 11:2) as communities of people are God's "son(s)" and God's wife (Storms, 2015:206).

The mission of the spiritual 'sons of God'³⁶⁰ – inherited by the corporate *imago dei* due to the success of the atonement mission of the perfect *imago dei* – is known as the Great Commission. It involves everything commanded in Matthew 28:16-20:

1. Go to all nations.
2. Make disciples of all nations (through proclamation and teaching).
3. Baptise all nations in the name of the Father, Son, and Spirit.
4. Teach all nations everything commanded by Jesus Christ.³⁶¹

Addison (2015:15) describes the Great Commission as a movement started by the incarnate word of God. He defines this as, "a group of people committed to changing the world." He goes on to say: "The spheres of politics, science, culture, and faith are shaped and remade by movements. Jesus founded the greatest movement this world has ever seen. That movement has at its heart the multiplication of disciples and churches - everywhere. As the risen Lord, he still leads the way." Through the missionary movement that followed the Great Commission the incarnate word of God started something completely new (Addison, 2015:37). Hurtado (2016:67) notes that although this movement was primarily one option among many Jewish groups in the Roman Empire it quickly became "translocal and transethnic".

5.15.2 Divine design: Order, pattern, and purpose

The special creations, as the pinnacle of creation, have divine order, divine pattern, and divine purpose to bring the cybernator glory through representation. The *imago dei*, in its three forms (original, perfect, and corporate), while subject to creation limits – both cosmic and biological (fine-tuning of the universe, the information within the DNA, and the suppressible natural law influencing us) – is commanded to bring divine order, divine pattern, and divine purpose into creation. The special creations, being cybernetic, bring these into creation.

³⁶⁰ The "sons of God" are those in special or intimate relationship with the Triune God. This terminology is used in Romans 8:14, Gal. 3:26, and 1 John 3:1 (Douglas & Tenney, 1989:563).

³⁶¹ Payne (2015:20) summarises these as church planting "in covenant community with other kingdom citizens". Payne derives his ideas in affirmation of Roland Allen's commitment to "spontaneous expansion" of indigenous churches led directly – even solely – by the Holy Spirit in an atmosphere of "missionary faith" which opposed devolution.

5.15.2.1 Anthropology: Divine order, pattern, and purpose in original *imago dei*

The original image of God, as the pinnacle of creation, had divine order, divine pattern, and divine purpose to bring the cybernator glory through representation through the mission of the cultural mandate. Since they were created as spiritual, personal, and relational beings, they automatically functioned to represent divine order, divine pattern, and divine purpose within creation uniquely. The first couple were both cybernated open systems and divinely cybernetic. Therefore, before the Fall, they were cybernated by having divine order, pattern, and purpose benevolently influencing them. Due to being cybernetic representatives of the triune God, they were equipped and called to manifest, maintain, and multiply divine order, pattern, and purpose within the creation.

The original image of God (Adam and Eve) was commanded to fulfil the cultural mandate which would bring divine order (Gen. 1:26-28). They embodied the order, pattern, and purpose of the visible divine missions of incarnation and sanctification and the invisible divine missions of knowledge and love. Due to being cybernetic representatives of the triune God, they were called to manifest, maintain, and multiply these patterns within the creation. For this function they had the ability of bringing divine order through human speech (Gen. 2:19-20), modelling divine communication within the creation (Gen. 1:3, 5-6, 8-11, 14-15, 20, 22, 24, 26, 28-30). They also were commanded to reproduce, which would extend the network of divine order, pattern, and purpose, universally.

Before the fall Adam and Eve were cybernated both internally (by being holy and sinless) and externally (through direct, unimpeded fellowship with the triune God). They were the original cybernetic divine order, pattern, and purpose. Bray (2014:52) calls this a “personal relationship” with the triune God which was “compromised by their disobedience” in the fall. As mentioned earlier, Hambrick (14) summarises the core holiness of the triune God into four quadrants: love, essence, wisdom, and power which are the order, pattern, and purpose for all humans to multiply.

At the fall Adam and Eve were tempted with the promise of “self-cybernation” (“you will be as God, knowing good and evil”, Genesis 3:5) – a property of the triune God. Although they were ordered, patterned, and purposed by the triune God, they wanted to self-order, self-pattern, and self-purpose. This, naturally, conflicted with the desired mode of cybernation by the triune God (word, fellowship (*koinonia*), and Lordship) and resulted in curses and expulsion (Gen. 3:14-24). Since they wanted to be sovereign self-shepherds without externally imposed divine benevolent influence, they had to be expelled (Gen. 3:22). They were now blocked access

from the life provided by the Tree of Life (Gen. 3:24), and this resulted in a deteriorating situation for humanity as all people were subsequently afflicted by sin and death (Gen. 2:17).

Part of the curse would be difficulty and complexity in continuing the mission of bringing divine order, pattern, and purpose to creation (Gen. 3:16-19). Adam and Eve's cybernetic Cultural Mandate was made difficult. Since the *imago dei* was damaged but not removable (Gen. 9:6), they would not be able to stop bringing order, pattern, and purpose by being representatives, but they would have frustration and difficulty (the "thorns and thistles" in Genesis 3:18 will actively oppose the success of the cultural mandate mission). Since the *imago dei* was damaged but not removable, they would not be able to stop bringing order, pattern, and purpose but they would have frustration and difficulty. Adam and Eve's cybernetic cultural mandate was made difficult.

5.15.2.2 Christology: Divine order, pattern, and purpose in perfect *imago dei*

The perfect image of God, as the pinnacle of creation, had divine order, divine pattern, and divine purpose to bring the cybernator glory through representation in the atonement. Natural theology only provides a "dim knowledge" of God. On the other hand, through the incarnational tri-mediatorial ministry of the anointed Jesus, and through the redemption narrative we have clear and unambiguous knowledge of the triune God (Jones, 2017:34). Williams highlights that the role of the prophet, epitomised in Jesus, is to be a mediator in both directions of the divine-human relationship (2003:34). He also notes that this role is likewise shared with the priestly function, with distinction and overlap (35).

The triune God is known supremely through the Son (Heb. 1): "God manifests his holiness not just in Christ's death but also in his person. He is the image of God's holiness.... In Christ, we have a walking picture of the law, a reflection of God's holy character" (Jones, 2017:166).

Since Jesus Christ has a human nature, He is in the *imago dei* and is thus spiritual, personal, and relational. Since He is sinless, He perfectly manifests representational divine order, divine pattern, and divine purpose in creation. Since the triune God is holy, he imparted holiness to Jesus Christ (169). The perfect *imago dei* has the constraints of the general creation, the higher-level functions of the original image of God (human communication patterned after God and the cultural mandate command) but without a sinful human nature³⁶². The *Logos Ensarkos* has a pattern of incarnation modelled after the eternal begottenness of the *Logos Asarkos*. He

³⁶² Jesus Christ lived in perfect communion with God the Father, always doing his will and recognizing him as truly and eternally God (Douglas & Tenney, 1989:609).

also had the purpose of redemptive atonement and mediation through the *munus triplex*. For this reason, He can represent us, and be perfectly obedient on our behalf. Williams (2003:143) shows that not only was Jesus Christ functioning in the role of the prophet, communicating the word of God, but He incarnated as the very Word of God.

5.15.2.3 Ecclesiology: Divine order, pattern, and purpose in corporate *imago dei*

The corporate image of God, as the pinnacle of the new creation, has divine order, divine pattern, and divine purpose to bring the cybernator glory through representation in the Great Commission. From this the ascended Lord works his image in the people of God (that is, church) by the indwelling Holy Spirit³⁶³ (Jones, 2017:169): “Christ must necessarily be glorified in those for whom he died. He makes the church pure, beautiful, and holy” (106).

Harrison (1962:120) highlights the parallel between the breath of life in the original image of God with the incarnate word of God breathing on the authoritative apostolic band in John 20:19-25. Bray, quoting Maximus, states, “The holy church is an image of God because it accomplishes the same unity among believers as God does” (2014:819). He continues: “The life of the believing community and the life of the individual believer thus merge into one. The church is like an outsized man, possessing its own mind (*nous*) and practical application of knowledge by its power of reasoning (*Logos*)”.

Since the church is composed of human beings baptised into Jesus Christ, it is in *imago dei* and is thus spiritual, personal, and relational and can therefore bring representational divine order, divine pattern, and divine purpose in creation, corporately. The corporate *imago dei* has the constraints of the general creation, the higher-level functions of the original and perfect *imago dei* (communication, cultural mandate, and mediation) as well as the great commission which is a mission of divine order, pattern, and purpose.

Table 37 System design and special creations

System design	Anthropology	Christology	Ecclesiology
1. Order	Bring order to creation.	Restore order to creation.	Renew order to creation.
2. Pattern	Individually spiritual, personal, and relational.	Maximally spiritual, personal, and relational.	Corporately spiritual, personal, and relational.
3. Purpose	Cultural mandate.	Atonement.	Great Commission.

³⁶³ Douglas and Tenney (257) note that the Holy Spirit always indwells God’s people as a corporate whole (Hag 2:5).

5.15.3 Divine cybernation: Information, feedback, and control

The special creations, being open systems within the creation, contain the information mentioned above. The *imago dei*, in its three forms, is subject to the fine-tuning of the universe, the information within the DNA, and the suppressible natural law influencing him. As the special creations, we are authoritatively, divinely directed in terms of information, feedback, and control to establish the cybernator's authority. Bray (2014:756-757) quotes Augustine who saw Christ's mediatorial works as communication of information through the Old Testament, through the incarnation of the person of Jesus Christ, through the apostolic band, and through the Bible. Bray (71) explains that even after the incarnation, the triune God remains invisible.

Sensing an intelligent source of information, humans infer a mind: the creator. This stimulates natural law within us. This 'information' is found in material artifacts. It is not the necessary and specific information that comes by special revelation, uniquely. Therefore, from looking at human history we repeatedly discover a 'prophetic voice' as all cultures desperately attempt to establish a source of divine revelation to guide their societies. The special creations, being open systems within the creation, have feedback. The *imago dei*, being personal, relational, and spiritual, has a broken fellowship (that is, a break in communication, communion, and community) with the triune God.

Due to our fallen status and sinful natures, we misunderstand the creator. Thereafter we attempt to establish feedback (divine-human fellowship) with an autonomous, and therefore highly flawed and subjective, understanding of God. This is derived from the pre-existing natural theology framework and is therefore incomplete, flawed, and imperfect. As a result, in every culture we see evidence of attempts at establishing feedback through priesthoods and sacrificial systems. The special creations, being open systems within creation, are subject to control. The *imago dei* is subject to the fine-tuning of the universe, the information within the DNA, and the natural law influencing them. The special creations, being endowed with the cultural mandate, also has the ability for societal shepherding, modelling divine control, and divine Lordship within the creation. In fallen and sinful humanity, we perceive cultural artifacts: communities of people being 'shepherded' by demonic entities, idols, etc.

5.15.3.1 Anthropology: Divine information, feedback, and control in the original *imago dei*

The original image of God, as the pinnacle of creation, was authoritatively, divinely directed in terms of divine information, divine feedback, and divine control to establish the cybernator's authority through the cultural mandate. Adam and Eve had the spoken word of God to provide

the necessary divinely revealed information which directed them. For this reason, the word of God and the presence of the triune God provided the prophetic word needed to bring negentropy to their life.

In terms of the mediator, Adam and Eve had modelled the role of God as prophet to the creation, providing special revelation through their speech and nonverbal behaviour. Thus, they are the archetype of Jesus Christ Himself who, by his incarnation and ministry, 'injects information' into creation through special revelation. Adam and Eve were uniquely qualified as the *imago dei*, through the special creation and the breath of the triune God, to model *koinonia* between the triune God and humanity. The triune God created the first couple in his image and likeness.

Through the work of Adam and Eve, being in the image of God, and in perfect *koinonia* with the triune God, and each other, we are created by divine means into *koinonia*. Once the original imago is created, it is uniquely equipped, or set apart, for divine representation in creation. The special creation of Adam and Eve establishes a feedback cycle with the triune God, in a fellowship of divine and human persons.

In terms of being the mediators, Adam and Eve were the primordial model of the priest of creation, providing a necessary divine-human communion and a life of sacrificial obedience. Thus, Adam and Eve modelled *koinonia* between the divine and humanity through functioning as a priest and living sacrifice. Since Adam and Eve were informed by the spoken word of God, and having fellowship with the triune God, they were perfectly controlled by the benevolent influence of the triune God. In terms of being the mediators Adam and Eve, as a couple, were the representative king of creation, providing rule and reign. Thus, Adam and Eve controlled creation through benevolent servant-leadership or 'shepherding'.

5.15.3.2 Christology: Divine information, feedback, and control in the perfect *imago dei*

The perfect image of God, as the pinnacle of creation, is authoritatively, divinely directed in terms of divine information, divine feedback, and divine control to establish the cybernator's authority through the atonement. Christ's human nature, like Adam and Eve's, is created to be cybernetic. Christ's human nature has divine information (cosmological, biological, and the word of God), divine feedback (sinless *koinonia* with the triune God), and divine control (non-suppressed natural law, the flesh submitted to the Spirit's benevolent influence, and being the way, truth, and life).

Jesus Christ had the spirated written word of God – the Old Testament – to provide the necessary divinely revealed information which directed Him. For this reason, having a human nature, the word of God and Holy Spirit is the prophetic word needed to maintain continuous negentropy in his life and ministry. In terms of the mediator, Israel had modelled the role of prophet to the Gentile nations and to creation, providing special revelation. Likewise, Jesus Christ Himself 'injects information' into creation through special revelation.

Jesus Christ was uniquely equipped, through the hypostatic union, to restore *koinonia* between divine and human natures. The Holy Spirit created the hypostatic union of Jesus Christ in the womb of Mary (Matt. 1:18-27). Through the work of the person of Jesus Christ, being in the hypostatic union and having perfect *koinonia* with the triune God, along with the indwelling provided by the Holy Spirit, we are restored by divine means into *koinonia*. Once the perfect image of God is incarnated, He is uniquely equipped, or set apart, for glorification. The indwelling Holy Spirit establishes a feedback cycle with the incarnate word of God and the triune God, a perichoretic union.

In terms of being the mediator, Jesus Christ is the true High Priest of Israel, church, and creation, providing a necessary divine-human reconciliation and providing a sacrifice. Thus, Jesus Christ Himself 'establishes feedback' between divine and human beings through functioning as both a reconciling priest (Heb. 4:14-16) and sacrifice (Eph. 5:2). Since Jesus Christ has a human nature, He inherits the cultural mandate. Since He was a eunuch, the mandate was not fulfilled through human reproduction but instead through discipleship. The unique mission or office³⁶⁴ or work³⁶⁵ of the Son of God – perfect *imago dei* – the mediator³⁶⁶ was intended to subdue the earth and bring control to creation, where Adam and Eve had failed.

Since Jesus Christ was informed by the spirated written word of God (the Old Testament) and has a perichoretic hypostatic union within his person and was indwelt by the Holy Spirit, He was perfectly controlled by the benevolent influence of the triune God. In terms of being the mediator, Jesus Christ is permanently king of his church, and creation, providing rule and reign, both now and forever. Thus, the ascended Jesus Christ himself controls the church and creation through benevolent servant-leadership or 'shepherding'.

³⁶⁴ It is a single, eternal, and anointed office of mediator (Muller, 2017:225).

³⁶⁵ *Officium* (225).

³⁶⁶ Jesus Christ's human nature can perform a redemptive act which represents human beings. As Augustine interpreted 1 Timothy 2:5, the mediator had to have a human nature to accomplish the mission (215).

5.15.3.3 Ecclesiology: Divine information, feedback, and control in the corporate *imago dei*

Since Jesus Christ has a sinless human nature, He ascended in glory. But because He is God the Son, He leaves church with the Great Commission and the Holy Spirit which guarantees its accomplishment. The unique completion of the threefold office provided a means for the church community, as prophets, priests, and kings, to subdue the earth and bring control to creation, where Adam and Eve had failed. As mentioned before, in terms of being mediator, Jesus Christ is prophet of the church and of creation, providing special revelation. Therefore He, through the church, injects information into creation through special revelation.

The corporate image of God, as the pinnacle of the new creation, is authoritatively, divinely directed in terms of divine information, divine feedback, and divine control to establish the cybernator's authority through the Great Commission. The church now has the spirated written word of God to provide the necessary divinely revealed information which directs her. For this reason, the word of God and the Holy Spirit provide the prophetic word needed to bring negentropy.

As mentioned earlier, in terms of being the mediator, Jesus Christ is high priest of the church and of creation, providing reconciliation. The Spirit, through church, 'establishes feedback' with creation by functioning as a reconciling priesthood (Rev. 1:6) and sacrifice (Rom. 12:1). The Holy Spirit creates the church (Bray, 2014:847). The church is now equipped in the same way by the restoration of *koinonia* provided by the indwelling of the Holy Spirit. Through the redemption of Christ and the sanctification provided by the Holy Spirit, we have the divine means now to restore the broken *koinonia*. Once the *imago dei* is restored through justification, it becomes prepared, or sanctified, for glorification. The indwelling Holy Spirit establishes a feedback cycle with the ascended word of God and the church, a perichoretic union.

In terms of the mediator, Jesus Christ is king of the church and of creation, providing rule and reign. Thus, through the church He "controls" creation through benevolent servant-leadership or "shepherding" (1 Pet. 2:9). Since the Church has been informed by the spirated written word of God and has a perichoretic union with the Lord Jesus Christ, through the indwelling Holy Spirit, the church is controlled by the benevolent influence of the triune God. The union with Christ begins with his incarnation, is affected by the Holy Spirit through faith, continues in his death and resurrection, through eternity and the future (Letham, 1993:75-87).

Table 38 Cybernetics and special creations

	Anthropology		Christology		Ecclesiology	
Cybernetics	Koinonia	Mediator	Incarnation	Mediator	Gospel	Mediator
1. Information	Communication	Prophet of creation	Revelation	Prophet	Spirated written word of God.	Prophetic
2. Feedback	Communion	Priest of creation	Reconciliation	Priest	Perichoretic union with Christ through Spirit.	Priesthood
3. Control	Community	King of creation	Rule	King	Benevolent influence of the triune God.	Kingdom

5.16 Special creations are eminently cybernetic

From this *via eminentiae* overview of the special creations as cybernated cybernetic systems, we conclude with the threefold GST goal true of all systems:

5.16.1 Independence

Eliminating ontological independence while establishing independence from sin, is the dual goal of the cybernator and the special creations.

5.16.2 Unidirectional dependence

Establishing absolute ontological dependence upon the triune God alone, while eliminating unidirectional dependence on anything, is the dual goal of the cybernator and the special creations.

5.16.3 Interdependence

Establishing interdependence is the goal of the cybernator and the special creations.

5.17 Conclusion

In this chapter we have used the two foundational systems thinking traditions to understand the creation from nothing and *imago dei*. To do this, we outlined how the framework of natural theology, although incomplete and flawed, includes GST and cybernetics system thinking

frameworks. From here we discussed how the doctrine of creation likewise uses creational GST and creational cybernetics system thinking to construct the doctrine of creation. We explained how creation is cybernated by the triune God, possesses the major properties of GST (openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation), including Skyttner's 10 irreducible properties of all open systems.

Creation is an integrated system and so exhibits absolute dependence on the triune God for its being. The special creation (humanity) is in *imago dei*. It is both cybernated and cybernetic. *Imago dei* is dependent on the triune God, should be independent from sin and idolatry, and should be interdependent with other image-bearers. We investigated how the divine missions, modelled by the *imago dei*, exhibit divine cybernetic direction. The triune God measures performance of creation, especially the special creation, in terms of effectiveness, efficiency, and efficacy. The triune God will solve the general control problems (being, behaving, and becoming) of general and special creations.

The purpose of the *opera dei ad extra* as cybernator is ultimately to create and maintain an integrated creation and *Imago dei*. This requires the special creation to *not* be independent, nor unidirectionally dependent but rather interdependent Christians who are increasingly Christlike in their theology: orthodox, orthokardia, and orthopraxy. This is so that the creation in general and the *Imago dei* particularly, can be truly sanctified, liberated, and glorified. This is to glorify the *Logos* the personal ascended word of God. And this, ultimately, is to glorify the triune God.

Finally, we understood the *Imago dei* (Original, Perfect, and Corporate) as representatives of divine cybernation. This means each one has their own mission from the Triune God, each one has divine design (order, pattern, and purpose) based on the Triune God himself and each one cybernates (providing information, feedback, and control) within creation.

CHAPTER 6 CONCLUSION

God is simple, which means He has no parts. However, everything humans know is composite and made of parts (including our language system necessary for describing reality). All Dogmatic Theology is a composite way of articulating reality, including essential and relational attributes of the non-composite being, called YHWH, and the most comprehensive tool for studying composite objects is the systems paradigm. It has been found useful in all kinds of knowledge systems. Is it useful in composing a Christian theology? When I set out to investigate this question, I considered this: **How can General Systems Theory (GST) be used to compose a whole Dogmatic Theology?**

This resulted in the following questions arising from this paradoxical problem:

1. What are the 10 irreducible properties of all open systems that are found in GST?
2. What are the major dogmatic 'conceptual parts' that in relationship will compose a whole dogmatic theology?
3. What happens when we apply the 10 irreducible properties of all open systems to the dogma of *theologia* - the doctrine of the triune God?
4. What happens when we apply the 10 irreducible properties of all open systems to the dogma of *creatio ex nihilo* - the doctrine of creation out of nothing?
5. How can GST be used to compose a whole dogmatic theology, using conceptual dogmatic 'parts' in light of the 10 irreducible properties of all open systems?

The main aim of the study then was to compose a whole dogmatic theology by using GST, i.e., by applying the 10 irreducible conceptual categories to the dogmatic 'parts'.

These questions provided me with the following research objectives:

1. outline and summarise the 10 irreducible properties of all open systems that are found in GST;
2. outline the major dogmatic 'conceptual parts' that in relationship will compose a whole Dogmatic Theology;
3. observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *theologia* - the doctrine of the triune God;
4. observe the effectiveness and results of applying the 10 irreducible properties of all open systems to the dogma of *creatio ex nihilo* - the doctrine of the triune God;
5. compose a whole dogmatic theology, using conceptual dogmatic 'parts' in light of the 10 irreducible properties of all open systems.

6.1 The cybernetics intrusion

However, as my research progressed and I gained a broader understanding of not only GST but the seven 'systems thinking' disciplines, I came to revise my quest, adding another necessary step. All seven systems thinking disciplines, arise from two: GST and cybernetics. In my reading I was faced with recurring issue that as soon as I began to describe dogmatic theology using GST, I inevitably came across cybernetics thinking. I realised that, in fact, these two disciplines come as a pair. We cannot describe a general system as 'open' without having to imply and then describe "What is it open to?" The answer, in every case, is cybernation or 'regulation' or 'control'. All general systems are cybernated or regulated or controlled by a cybernetic agency or agent. With this new additional requirement, I endeavoured to fulfil the previous requirements as stated above but to also include cybernetics systems thinking categories as well. Even though this took more time and was complex, I found the sub-discipline to be naturally compatible with Dogmatic Theology.

6.2 GST

We summarised the system principle which explains what a system is and what it does as well as some foundational ideas of the open system. Here GST is the main sub-discipline and it concerns:

1. Openness/cyberneted (which is regulation, or control, from another)
2. Boundary/enviored
3. Hierarchy/nestedness
4. Emergence/design pattern/downward causation

From this we moved to systems thinking and how it is focused on order (as well as pattern, and purpose) and the transcendentals and is part of the systems paradigm with its processes for interpreting reality, and being holistic, it opposes all reductionism. We summarised GST as one of the two fundamental systems thinking traditions. In addition to GST, we add the other fundamental system thinking tradition of cybernetics which is concerned with:

1. Information
2. Feedback
3. Control

From these we gave a short summary of Skyttner's 10 irreducible properties of open systems and converted these into 10 conceptual principles which we used as a structure for a dogmatic theology conceptual model, applicable to both the dogma of the triune God and the doctrine of creation from nothing.

6.3 Theological cybernetics and GST

We used the two foundational systems thinking traditions to understand the written word of God and its servant, dogmatic theology, as both cybernetic and cybernated systems. Both provide information, feedback, and control. Both are open (cybernated, regulated, or controlled), have boundaries, exist in a hierarchy/nestedness, and have emergent properties. To do this, we outlined cybernetics systems thinking in more detail as well as what I termed 'authoritative divine direction'. The latter is nested authority or authorisation and is founded

ultimately on the Triune God's inherent authority. This authority terminates on the written word of God which is the means of authoritative divine direction within creation.

The written word of God and dogmatic theology are therefore the means of cybernetic direction for the church. They each one measure the performance and solve the general control problems of the church, bringing order, pattern, and purpose.

We explained how the written word of God and dogmatic theology are cybernated (directed, controlled, and regulated), possessing all four properties of GST systems (openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation), including Skyttner's 10 irreducible properties of open systems. Both the written word of God and dogmatic theology are integrated systems which combat independence and unidirectional dependence of their 'parts' and retain interdependence of their 'parts'.

The purpose of the written word of God, as cybernetic and cybernated open system is ultimately to create and maintain a church that is integrated too: interdependent (that is, loving) Christians who are increasingly Christlike in their worldview: orthodox, orthokardia, and orthopraxy. This is so that Christians in church can be sanctified, liberated, and glorified progressively. This is for the purpose of the personal ascended word of God to be glorified. And this is to glorify the triune God.

In summation then, we believe we have accurately shown that both GST and cybernetics systems thinking frameworks are applicable to natural theology and Dogmatic Theology. As there are only two distinct subjects to be understood (creator and creature), and their relation³⁶⁷, we showed how GST can be used cataphatically and cybernetics can be used analogically to describe the triune God. Similarly, we used GST to describe creation and cybernetics to describe *imago dei*.

³⁶⁷ The subjects are creator (distinction and relation) and creation (distinction and relation).

Being and Knowledge	Distinction	Relation
Creator	Totally different to Creation (Divine Simplicity)	Yet loves Creation.
Creature	Totally different to Creator (Composite Being)	Yet can love the Creator, in response.

6.4 The dogma of the triune God

We used the two foundational systems thinking traditions to understand the triune God, as both not an open system and as cybernetic. Natural theology, although incomplete and flawed, includes GST and cybernetics system thinking categories and provides a compatible network for integration with the dogma of the triune God. Somewhat surprisingly, we noticed that rather than being completely incompatible with revealed theology, natural theology uses the same frameworks. Although not salvific³⁶⁸ by itself, natural theology is not to be discarded outright but can be understood as preparatory. As already noted, revealed (that is, dogmatic or systematic) theology uses GST and cybernetics system thinking to construct the dogma of the triune God. Cataphatically, the triune God is not:

1. cybernated (directed and regulated),
2. bound
3. in a hierarchy/nestedness
4. emergent/designed

Although his being and persons exclude Skyttner's 10 irreducible properties of all open systems, we can construct the dogma *via negativa*. The triune God is not an integrated system and so He exhibits absolute independence (aseity). Likewise, He requires absolute dependence (faithful allegiance) from creation, Christ's human nature, and church. He does not exhibit interdependence (human love), as we understand it. The love between the persons (Father, Son, and Holy Spirit), although interpersonal, is intra-being and therefore cannot be interdependent.

The two divine missions and the two eternal processions exhibit divine cybernetic direction. We outlined how by means of the divine missions the triune God measures performance (effectiveness, efficiency, and efficacy). The divine control will check within creation, Christ's human nature, and church and solve the general control problems (being, behaving, and becoming). By the visible and invisible divine missions of the Son and Spirit, the triune God designs, establishing order, pattern, and purpose.

³⁶⁸ As Williams reminds us, only Scripture is redemptive revelation (2003:140).

The purpose of the triune God *ad extra* as cybernator is ultimately to create, maintain, and develop an integrated creation, Christ's human nature³⁶⁹, and church. This requires these beneficiaries to not be independent, nor unidirectionally dependent, but rather interdependent Christians who are increasingly Christlike in their theology: orthodox, orthokardia, and orthopraxy. By this means, creation, Christ's human nature, and church is sanctified, liberated, and glorified. This is to bring glory to the *Logos*, the personal ascended word of God. And this, in turn, is to glorify the triune God. We explained how the triune God *ad intra* is understood using cybernetics analogically but it transcendent and will only be truly known in the glorified state.

6.5 The doctrine of creation from nothing

Once we established the dogma of the triune God, we were left with the remaining subject: creation. We used the two foundational systems thinking traditions to understand the creation from nothing, with a major focus on *imago dei* (original, perfect, and corporate). Once again, we recognised that the natural theology framework, albeit incomplete and flawed, includes GST and cybernetics system thinking frameworks, comparable to the revealed truth of the doctrine of theology, and preparatory. As mentioned already, the doctrine of creation likewise uses creational GST and creational cybernetics system thinking frameworks to construct the doctrine of creation. We recalled that creation is cybernated by the triune God, possessing the four major properties of GST (openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation), as well as Skyttner's 10 irreducible properties of all open systems.

Creation is an integrated system and so it exhibits absolute ontological dependence on the triune God for its being, operations, and transformation. The special creation (humanity) is *imago dei*. It is both cybernated and cybernetic. *imago dei* is dependent on the triune God, should be independent from sin and idolatry, and should be interdependent with other image-bearers. The divine missions, modelled by *imago dei*, exhibit divine cybernetic direction. The triune God measures performance of creation, especially the special creation, in terms of effectiveness, efficiency, and efficacy. The triune God will solve the general control problems (being, behaving, and becoming) of general and special creations.

³⁶⁹ That is, since Jesus Christ is wholly human, his human nature is composite, as ours is. In addition to this He also has integration between the divine and human natures, the divine is wholly ontologically independent while the human is wholly dependent. This model of divine-human integration is desirable for every individual member of his body, and the church, corporately.

The purpose of the *opera dei ad extra* as cybernator is ultimately to create, maintain and develop an integrated creation and *imago dei*. This requires the special creation to not be independent, nor unidirectionally dependent, but rather interdependent Christians who are increasingly Christlike in their theology: orthodox, orthokardia, and orthopraxy. This is so that the creation in general and the *imago dei* particularly, can be truly sanctified, liberated, and glorified. This is to glorify the *Logos* the personal ascended word of God. And this, ultimately, is to glorify the triune God.

Finally, we understood the *imago dei* (original, perfect, and corporate) as representatives of divine cybernation. This means each one has their own mission from the triune God, each one has divine design (order, pattern, and purpose) based on the triune God himself and each one cybernates (providing information, feedback, and control) within creation.³⁷⁰

6.6 Conclusion

From this study, I have realised that human reason (as found in systems thinking categories of GST and cybernetics) is not at all at odds with revelation³⁷¹. Hopefully this has provided some common ground for the typically distinct faith and reason, showing that every person is responsible to the triune God, and is without excuse. Finally, my hope is that the Gospel message, including the atoning redemptive mediation in Jesus Christ's threefold office, provides a naturally resonant model to us, showing us how by his own visible and invisible

³⁷⁰ At a late stage I discovered Kepler's epistemological triad of *archetype*, *copy*, and *image*. These are note incompatible with my model which similarly proposes negative GST and analogical cybernetics. See Travis, *Thinking God's Thoughts* (2022).

³⁷¹ What I mean is that the systems thinker before and after revelation will still have the same 8 categories of thought in their mind. The General Revelation and the Special Revelation should be understood as addressing the same issues that exist in the system thinker.

Systems Thinking	Natural Knowledge: General Revelation	Revealed Knowledge: Special Revelation	Biblical, Historical, and Dogmatic or Systematic Knowledge: Assembled Revelation
Information	Cybernetics is present in living creatures.	The Bible is cybernetic in form and content.	Biblical, Historical, and Dogmatic or Systematic Theology is cybernetic.
Feedback			
Control			
Openness	General Systems Theory properties are present in all living creatures.	The Bible has the same properties of all General Systems.	Biblical, Historical, and Dogmatic or Systematic Theology has the same properties of all General Systems.
Boundary			
Hierarchy			
Emergence/Design	A non-composite Source, Maintainer, and Transformer of living creatures can be inferred.	The Bible has transcendent source, content, and intent.	Biblical, Historical, and Dogmatic or Systematic Theology indirectly has transcendent source, content, and intent.
Transcendence			

missions providing knowledge, and with the Holy Spirit's visible and invisible missions providing love, the church primarily and the rest of creation are undergoing a cosmic cybernation, by the uncybernated cybernator.

6.7 Directions for future research

We believe that the seven categories of knowledge of being (information, feedback, control, openness/cybernated, boundary/enviored, hierarchy/nestedness, and emergence/design pattern/downward causation) can have one final category: transcendence. This final category is what can be inferred about the divine being from general revelation and inferred and clarified from special revelation. With these eight epistemological tools we believe it is possible to address one or more of the following subjects within Dogmatic Theology:

1. Theological systems thinking (cybernetics and GST) and the three Great Mysteries (Trinity, Christology, and salvation).
2. Theological systems thinking (cybernetics and GST) and the essence-energies distinction in western and eastern traditions.
3. Theological systems thinking (cybernetics and GST) and Eternal Functional Subordination.
4. Theological systems thinking (cybernetics and GST) as a framework for natural theology.
5. Theological systems thinking (cybernetics and GST) and the hypostatic union.
6. Theological systems thinking (cybernetics and GST) and the divine missions (visible and invisible).
7. Theological systems thinking (cybernetics and GST) and union with Christ.
8. Covenantal system design: order, pattern, and purpose in the covenants.
9. Jesus Christ's threefold cybernation of creation and church.

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