THE CHURCH AS THE BODY OF CHRIST: SYSTEM THEORY AND THE CHURCH

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CONTENTS

ABSTRACT

This paper presents a brief overview of system theory and showcases the possible strengths and weaknesses of system theory applied to the church. It sets forth system theory as a viable option regarding church organizational structure that is in line with biblical teaching. A systematic view of the church is specifically supported by the metaphor of the body of Christ used by Saint Paul. Furthermore, a view of the church as an emotional system within the bounds of Bowen's family system theory will help the pastor understand the anxiety within his church.

INTRODUCTION

"Why don't more people get involved in the church?" "What happens to the ministry of the church when the pastor takes a call away from a congregation?" These two questions spurred me onward into research that lead in unexpected directions. I wanted to discover a model of viewing the church that emphasizes the pastor's role as an equipper to allow the ministry of the congregation to continue long beyond his tenure as pastor there. Furthermore, I strove to find a model of church organization that would empower the members of the congregation to utilize their unique spiritual gifts for the advancement of God's kingdom. The research landed me squarely in system theory. This paper will show that system theory is compatible with biblical theology and can be beneficial to the Lutheran Church.

This paper aims to present a brief introduction to system theory as an organization-building tool. Then, it will show how system theory is a biblically appropriate model for church organization based on the metaphor of the body of Christ and the doctrine of vocation. It will present the church as a system, as an emotional system, and provide the potential implications of these approaches. Lastly, this paper will present the reader with areas of future research and application where the theory behind system thinking can be put into practice and evaluated for its usefulness in the church.

SYSTEM THEORY INTRODUCTION

Peter Steinke, in his book *How Your Church Family Works*, writes that "system theory focuses attention on how interactions are mutually influenced and how they become patterned or repeated."[1] System theory is all about how objects, individuals, and processes are connected and linked to one another, and how they constantly influence each other, often producing unexpected or unwanted change.

How Systems are Different

In order to apply system theory, one must first know what system theory is. System theory is a framework used to reframe the way we view, address, and solve problems. Peter Steinke writes, "System thinking considers the *interrelatedness* of the parts. Instead of seeing isolated, unrelated parts, we look at the whole."[2] In her work *Thinking in Systems: A Primer*, Donella Meadows defines a system as "a set of elements or parts that is coherently organized and interconnected in a pattern or structure that produces a characteristic set of behaviors, often classified as its 'function' or 'purpose.'"[3]

Kim identifies four defining characteristics of systems. He says that all systems must have a purpose, that all parts must be present for a system to optimally carry out its purpose, the order of the pieces within the system affects its performance, and that they attempt to maintain stability through feedback.[4] In order to illustrate systems, Kim presents an iceberg of layers. At

1 Peter L. Steinke, *How Your Church Family Works: Understanding Congregations as Emotional Systems* (Washington, DC: Alban Institute, 1993), 6. (Emphasis Removed)

2 Steinke, *How Your Church Family Works*, 3. (Emphasis Original)

3 Donella H. Meadows and Diana Wright, *Thinking in Systems: A Primer* (White River Junction, Vt: Chelsea Green Pub, 2008), 188.

4 Daniel H Kim, "Introduction to Systems Thinking" (n.d.): 3.

its tip are events—"the occurrences we encounter on a day-to-day basis."[5] The layer below events are patterns—"the accumulated 'memories' of events. When strung together as a series over time, they can reveal recurring trends."[6] The next and lowest layer of the iceberg is systemic structure—"the ways in which the parts of a system are organized. These structures actually generate the patterns and events we observe."[7]

The modern world of rationalism loves the idea of linear progression, of cause-and-effect. If you can identify the reason that something happened, you can influence the outcome. "A" proceeds to "B." "B" proceeds to "C." if you want to change "C", modify something about "B." if you want to change "B," modify "A." The step-by-step processes of manufacturing permeate the social consciousness. Imagine a divisive political issue. Group-A wants outcome-A, while group-B wants outcome-B. During the election, the Candidate for Group-A promises to change the laws to ensure outcome-A and prevent outcome-B, while the incumbent (a member of group-B) promises to ensure that outcome-B continues to persist. In the election, candidate-A wins and enters into office. During their term in office, outcome-B persists, and the promise of outcome-A is never realized. The people of group-A are surprised and confused as to why electing Candidate-A didn't produce outcome-A. Situations like this one arise because many more factors are influencing the outcome than a single candidate. If one is thinking linearly, they will fail to see the other factors at work. A systematic approach will help explain the unexpected by evaluating all the factors and how they are connected.

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5 Kim, "Introduction to Systems Thinking," 4.

6 Kim, "Introduction to Systems Thinking," 4.

7 Kim, "Introduction to Systems Thinking," 4.

System theory rejects the single-cause-yields-single-effect linear approach of the industrial era. Instead, it yearns for a comprehensive model that represents not only the results of the actions performed, but also the relationships between actions performed, outcomes achieved, and external factors that are seemingly unrelated at first glance. The goal of system theory is to understand how all the pieces of the process influence each other to gain a complete understanding of the process. Only once the process's system is understood, can change be effectively and predictably implemented.

System Theory Terminology

System theory uses several terms that need to be defined: stock, flow, feedback loop, balancing feedback loop, reinforcing feedback loop, and dynamic equilibrium. Stock refers to "an accumulation of material or information that has built up in a system over time."[8] Stocks can be anything: the number of cars on the car lot, the temperature in the room, the anxiety in a family, or the number of mistakes made by the engineering department in the last month. The stock is the measure of the thing being managed and evaluated.

A flow is "material or information that enters or leaves a stock over a period of time."[9] The flows determine the rate of change of the stock. If the sum of all inflows is greater than the sum of the outflows, the stock will increase. If the opposite is true, the stock will decrease. For example, in a room whose temperature is regulated by a thermostat, the inflow is the hot air from the furnace, while the outflow is the leakage of heat to the exterior of the house. The temperature

8 Meadows and Wright, *Thinking in Systems*, 188.

9 Meadows and Wright, *Thinking in Systems*, 187.

in this room is the stock. If the inflow of heat is greater than the outflow of cold, the temperature in the room will rise. If the outflow is greater, the room will cool.

A feedback loop is "the mechanism (rule or information flow or signal) that allows a change in a stock to affect a flow into or out of that same stock."[10] A feedback loop is a collection of causal connections that are influenced by the level of the stock, and, through a series of rules and interactions, influence the level of the stock. There are two types of feedback loops: balancing (or negative) and reinforcing (or positive). A balancing or negative feedback loop is one such loop that pushes the stock in the opposite direction. Meadows defines this type of feedback loop as "a stabilizing, goal-seeking, regulating feedback loop … because it opposes, or reverses, whatever direction of change is imposed on the system."[11] That is, if the stock is decreasing, a balancing feedback loop will attempt to increase the inflow or slow the outflow to balance out the decrease. But if the stock is increasing, the balancing loop's feedback will push against it, trying to turn the tide. In the example of a room being heated, the fact that the warmer the room is (the bigger the stock, i.e. the room's temperature) the quicker the cooling effect happens because of the laws of thermodynamics. In this case, thermodynamics is acting as a balancing loop, pushing back against the heating of the room. And the more the room is heated, the stronger the effect from the balancing loop.

Reinforcing feedback loops are "an amplifying or enhancing feedback loop, also known as a 'positive feedback loop' because it reinforces the direction of change. These are vicious cycles and virtuous circles."[12] Reinforcing loops are sometimes called win-more or lose-more

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10 Meadows and Wright, *Thinking in Systems*, 187.

11 Meadows and Wright, *Thinking in Systems*, 187.

12 Meadows and Wright, *Thinking in Systems*, 187.

loops. One example of this is the war board game of *Risk* by Hasbro. As the game stabilizes beyond the initial conflicts, some boundaries are set, and generally speaking, one player controls more territory than any of the other players. That player is then granted additional cards, which can be traded in for additional armies. The number of armies granted for each card turned in increases as more cards are turned in. So, the player in the stronger position gains more ability to strengthen his position, while the player in the weaker position loses finds himself in a weakening position. The popular term for this situation is a "snowball" (if winning) or a "death spiral" (if losing). Both sides of the conflict in *Risk* are experiencing reinforcing feedback loops: one that leads to victory, and the other to defeat. As the stock of territories controlled increases or decreases, the ability of that player to retain and conquer territory likewise increases or decreases.

> It is also important to recognize the limits of feedback loops.
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> The information delivered by a feedback loop can only affect future behavior; it can't deliver the information, and so can't have an impact fast enough to correct behavior that drove the current feedback. A person in the system who makes a decision based on the feedback can't change the behavior of the system that drove the current feedback; the decisions he or she makes will affect only future behavior.[13]

In other words, feedback loops can only influence the future behavior of the system. They can't change past actions or the actions that created the feedback in the first place. This is due, in part, to the delays that inherently exist in system models. Delays are the bottlenecks of systems. They can exist in any part of the system. There may be a delay in the inflow, the outflow, or any of the feedback loops.

A stable system is said to be in a state of dynamic equilibrium. Meadows defines dynamic equilibrium as, "the condition in which the state of a stock (its level or its size) is steady

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13 Meadows and Wright, *Thinking in Systems*, 39.

and unchanging, despite inflows and outflows. This is possible only when all inflows equal all outflows."[14] Dynamic equilibrium is essentially a stalemate between inflows and outflows. Neither makes headway against the other, so the stock remains stable with little fluctuation. One should note, however, that dynamic equilibrium is not an inherently desired trait. For example, if the national economy is in a state of dynamic equilibrium, it means that there is neither growth nor recession, which is not a desirable outcome for a system with the goal of economic growth. With the necessary terms defined, we will now look at why systems work.

Why Systems Work

Systems are empowered to function effectively long-term through building in resilience, self-organization, and hierarchical structures. If done correctly, this will allow any system developed to function well beyond the time the designers are included in it.

The reason that systems work is because they fall within a hierarchy, are resilient, and are self-organizing. Every system falls within another system, with the lone exception of the (imagined) system model that encompasses the entire universe. To understand how systems interact with one another, and therefore how to design systems well, we must understand the concept of system hierarchies. When modeling a hierarchy of systems, systems are nested within systems. For example, a human liver cell is a system all by itself, and it is part of the larger system of the entire liver. The liver itself is a component of the body as a whole, assisting in digestion and hormone production (among many other things). At each step (cell, organ, body), multiple systems are functioning interdependently of each other. Meadows points out that having hierarchies of systems give the system stability and resilience, along with reducing the amount of

14 Meadows and Wright, *Thinking in Systems*, 187.

information that any singular part of the system has to keep track of.[15] The smaller systems are generally referred to as subsystems. Within the hierarchy, the relationship between systems within each subsystem is stronger and more influential than the relationship between subsystems is.[16] In the human body, the cells of the liver subsystem interact and communicate with each other much more frequently and strongly than they do with the cells in the heart subsystem. This isn't to say there is no communication, but rather that there are different levels of connectedness among the various systems and subsystems.

The purpose of a hierarchy is to serve the purpose of its subsystems. Meadows argues that "hierarchies evolve from the lowest level up—from the pieces to the whole, from cell to organ to organism, from individual to team, from actual production to management of production."[17] The system thinker's goal is to design a system only as complicated as it needs to be to improve the capabilities of the subsystems to achieve their goals. One way it accomplishes this purpose is by ensuring that information only spreads as far as it is needed, neither excluding vital participants nor including unnecessary implements.

The system thinker needs to be aware of two dangers in designing a hierarchy: suboptimization and too much central control. Suboptimization occurs when one particular subsystem's goals "dominate at the expense of the total system's goals."[18] Meadows provides a few examples: "If a team member is more interested in personal glory that in the team winning, he or she can cause the team to lose. If a body cell breaks free from its hierarchical function and

15 Meadows and Wright, *Thinking in Systems*, 83.

16 Meadows and Wright, *Thinking in Systems*, 83.

17 Meadows and Wright, *Thinking in Systems*, 84.

18 Meadows and Wright, *Thinking in Systems*, 85.

starts multiplying wildly, we call it cancer. If students think their purpose is to maximize personal grades instead of seeking knowledge, cheating and other counterproductive behaviors break out."[19]

The ditch on the opposite side of the road from suboptimization is too much central control. "If the brain controlled each cell so tightly that the cell could not perform its self-maintenance functions, the whole organism could die."[20]

The hierarchy needs to "balance the welfare, freedoms, and responsibilities of the subsystems and total system—there must be enough central control to achieve coordination towards the large-system goal, and enough autonomy to keep all subsystems flourishing, functioning, and self-organizing."[21] It is also paramount to remember that the higher-level systems are meant to improve the ability of the subsystems to achieve their goals. A system hierarchy with resiliency will be able to adapt to variable circumstances.

Resiliency is the system's ability to persist in a variable environment. "The opposite of resilience is brittleness or rigidity."[22] It is also important to note that resiliency is not the same thing as a system being static or constant over time. This is important to note because "static stability is something you can see; it's measured by variation in the condition of a system week by week or year by year. Resilience is something that may be very hard to see, unless you exceed its limits, overwhelm and damage the balancing loops, and the system structure breaks down."[23] The resiliency of a system comes from a robust set of feedback loops that can work to restore the

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19 Meadows and Wright, *Thinking in Systems*, 85.

20 Meadows and Wright, *Thinking in Systems*, 85.

21 Meadows and Wright, *Thinking in Systems*, 85.

22 Meadows and Wright, *Thinking in Systems*, 76.

23 Meadows and Wright, *Thinking in Systems*, 77.

dynamic equilibrium of the system state. Balancing loops try to bring the stock back to its original state, and when several balancing loops are in play, the system has resilience. Meadows says, "Resilience is provided by several such loops, operating through different mechanisms, at different time scales, and with redundancy—one kicking in if another one fails."[24] When working with systems, they need to be managed for resilience along with productivity and stability.[25] Meadows describes resilience as a plateau "upon which the system can play, performing its normal functions in safety."[26] The higher the resilience of the system, the larger the plateau it is on. And the walls around the plateau are elastic, allowing the system to move around and gently bounce off the walls so it avoids the dangerous edges where everything falls apart. As the system's resilience decreases, the size of the plateau shrinks and the walls become shorter and harder, eventually, the system is resting on a knife-edge, at risk of falling apart at the slightest provocation or imbalance. At this point, the system may be very stable, but it lacks all flexibility and resiliency. A system with no resiliency will be unable to respond to any changes in stock or flows.

In addition to resiliency, self-organization helps us determine the capabilities of a system. If a system contains a set of feedback loops that can restore or rebuild feedback loops, it has meta-resilience.[27] The higher level of "meta-meta-resilience" comes from the presence of feedback loops that can "learn, create, design, and evolve ever more complex restorative structures."[28] If this level of meta-meta-resilience is present in the system, the system is

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24 Meadows and Wright, *Thinking in Systems*, 76.

25 Meadows and Wright, *Thinking in Systems*, 78.

26 Meadows and Wright, *Thinking in Systems*, 78.

27 Meadows and Wright, *Thinking in Systems*, 76.

28 Meadows and Wright, *Thinking in Systems*, 76.

considered to be self-organizing.[29] A self-organizing system can make its structure more complex. This is another important, overlooked quality that is often sacrificed for stability and productivity, just like resilience. Yet rules that create self-organization are often deceptively simple. For example, consider a basic fractal: the Kock snowflake. "Imagine a triangle with three equal sides. Add to the middle of each side another equilateral triangle, one-third the size of the first one. Add to each of the new sides another triangle, one-third smaller. And so on… Its edge has tremendous length—but it can be contained within a circle."[30] Similarly, all the complex life found within creation, from the virus to the human to the redwood tree are based on the organizational rules contained with the chemistry of RNA, DNA, and protein molecules. All of creation was created as a system, from the interaction of global weather patterns to the local ecosystem found in your potted plants, everything interacts with everything, and in that regard, hierarchies emerge. Those systems which can adapt themselves to an ever-changing environment through self-organization will be most likely to thrive and meet their goals over time. By promoting the hierarchical properties, resilience, and self-organization of systems, the system thinker improves its ability to function over the long-term, perhaps even beyond the time that they are a part of the system.

NON-OBVIOUS ASPECTS OF SYSTEMS

System thinking is a way of modeling the world around us to make sense of it. Yet, no matter how grand and complicated we make the system diagram, it will never be able to account for every variable and relationship present in the real world. Still, systems increase our

29 Meadows and Wright, *Thinking in Systems*, 76.

30 Meadows and Wright, *Thinking in Systems*, 80.

understanding of the relationships between various factors. People "often draw illogical conclusions from accurate assumptions, or logical conclusions from inaccurate assumptions" due to our limited ability to track multiple variables.[31] One of the goals of system theory is to help us take a step back from the seemingly incongruous events and see the larger picture of feedback loops that caused the confusion in the first place. This requires us to shift our focus away from the short-term goal and look for long-term behavior and structure.[32] "Unless you are aware of false boundaries and bounded rationality; unless you take into account limiting factors, nonlinearities and delays[,] you are likely to mistreat, misdesign, or misread systems," especially if you don't respect their properties of resilience, self-organization, and hierarchy.[33] Therefore, we will examine the underlying, and oftentimes hidden and surprising, aspects of systems: structure-based models, non-linear relationships, false boundaries, limits, delays, bounded rationality, system levers, system traps, and limitations of systems. Mastering these will give us great influence over the systems in our lives and ministries.

Structure-based Models vs. Event-based Models

The world, and especially the news media, is obsessed with the events that occur in the moment. Rarely does it stop to consider the historical context of the event to understand what led to it, rather the emphasis is on hooking our emotions to seek out more events layered with advertisements. This event-centric view of the world has little predictive or explanatory ability.[34]

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31 Meadows and Wright, *Thinking in Systems*, 86.

32 Meadows and Wright, *Thinking in Systems*, 87.

33 Meadows and Wright, *Thinking in Systems*, 87.

34 Meadows and Wright, *Thinking in Systems*, 88.

The system thinker wants to know the behavior of the system over time. The behavior over time could be growth, stagnation, decline, oscillation, randomness, or evolution.[35] Long-term, behavior provides clues to the underlying system structure, which will unlock the reason why something is happening, beyond the simple reporting of what is happening.

System thinkers will oscillate constantly between structure and behavior. They will observe the behavior over time, and use that information to construct their own system diagram with stocks, flows, balancing feedback loops, and reinforcing feedback loops. Then as more information and data are collected, the system diagram will be adapted and modified to fit the new trajectories of data, to ensure that the diagram is as accurate to the underlying structure as possible. Meadows illustrates this with the picture of a person holding a slinky out in front of them and releasing one end of it: "System thinkers strive to understand the connections between the hand releasing the Slinky (event) and the resulting oscillations (behavior) and the mechanical characteristics of the Slinky's helical coil (structure)."[36]

In building behavior-level and structure-level models, it can be easy to try to find the relationship between various flows, but that relationship doesn't exist. "There's no reason to expect any flow to bear a stable relationship to any other flow. Flows go up and down, on and off, in all sorts of combinations, in response to stocks, not to other flows."[37] Meadows shows the difference between behavior and structure level thinking by returning to the example of a thermostat.

> Suppose you knew nothing at all about thermostats, but you had a lot of data about past heat flows into and out of the room. You could find an equation telling you

35 Meadows and Wright, *Thinking in Systems*, 88.

36 Meadows and Wright, *Thinking in Systems*, 89.

37 Meadows and Wright, *Thinking in Systems*, 90.

> how those flows have varied together in the past, because under ordinary circumstances, being governed by the same stock (temperature of the room), they do vary together.
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> Your equation would hold, however, only until something changes in the system's structure—someone opens a window or improves the insulation, or tunes the furnace, or forgets to order oil. You could predict tomorrow's room temperature with your equation, as long as the system didn't change or break down. But if you were asked to make the room warmer, or if the room temperature suddenly started plummeting and you had to fix it, or if you wanted to produce the same room temperature with a lower fuel bill, your behavior-level analysis wouldn't help you. You would have to dig into the system's structure.[38]

This underlines the impact that structure-level thinking can have on improving our ability to understand and respond to the changes that occur in our lives. If we remain event-focused and ignore their history and context, the changes we try to make will be unlikely to elicit the change we desire.

Non-linear Relationships

This difficulty stems from the fact that it is easier and cleaner to impose linear relationships on a decidedly non-linear world. A linear relationship between two elements within a system is defined on a graph as a straight line; the slope of the line is constant and a greater input always yields a greater output.[39] For example, if there one person completes a task on their own in ten hours, a logical linear assumption would be that adding a person would reduce the time to complete the task. A linear model would see this, and continue the trend of increasing workers to decrease the time to task completion. In a linear model, more workers will always be better than fewer workers. Or, take fertilizer on a field. If a farmer applies one hundred pounds of fertilizer to his field, his harvest increases by twenty bushels. So, if he were to apply two hundred pounds,

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38 Meadows and Wright, *Thinking in Systems*, 90.

39 Meadows and Wright, *Thinking in Systems*, 91.

his harvest should increase by forty bushels. Then three hundred pounds of fertilizer should increase the yield by sixty bushels. These hypothetical linear relationships are not accurate models of the world we live in.

The world is full of non-linear relationships. Non-linear relationships are relationships "in which the cause does not produce a proportional effect. The relationship between cause and effect can only be drawn with curves or wiggles, not with a straight line."[40] In the real world, one hundred pounds of fertilizer on a field might produce a twenty-bushel increase. But two hundred pounds might only produce an increase of five bushels. And three hundred pounds of fertilizer could decrease the yield of the field. "If we've learned that a small push produces a small response, we think that twice as big a push will produce twice as big a response. But in a nonlinear system, twice the push could produce one-sixth the response, or the response squared, or no response at all."[41] Another example of this is the American education system. There are budget shortfalls that caused some programs to be cut or underfunded, so taxes are raised, referendums are passed, and grants are received to make up the budget deficit. This helps some programs improve and student performance may improve slightly. The next time that there is a budget shortfall, the previous success of increasing the amount of money available to the school is seen, and it is decided that to see a more marked improvement, more money should be allocated. Especially in the large cities, politicians have been throwing increasingly large amounts of money at the school problem, expecting that the more money a school receives, the more it will improve. Yet many of the same problems have persisted despite the increase in dollars spent on the schools. The imposition of a linear relationship on a non-linear relationship

40 Meadows and Wright, *Thinking in Systems*, 91.

41 Meadows and Wright, *Thinking in Systems*, 91.

may be leading politicians and government officials down an ineffective path. The fact that there are so many non-linear relationships in systems means that "their relative strengths shift in disproportionate amounts as the stocks in the system shift. Nonlinearities in feedback systems produce shifting dominance of loops and many complexities in system behavior."[42]

False Boundaries

Another non-obvious factor of systems is the false boundaries at the edge of the model. The first flow into the system starts, and the last flow out ends, with a nebulous and arbitrary place-holder. Meadows uses clouds in her diagrams. One might be tempted to view these placeholders as the start and the end of the system, however, they are not. In reality, "they are stocks—sources and sinks—that are being ignored at the moment for the purposes of simplifying the present discussion."[43] The arbitrary placeholders are the beginning and end of the system model that is being worked with, but they do not indicate the edges of the system or interaction among the elements. "They rarely mark a real boundary, because systems rarely have real boundaries. Everything, as they say, is connected to everything else, and not neatly … There are only boundaries of word, thought, perception, and social agreement—artificial, mental-model boundaries."[44] We must decide what gets included in our system model and what is excluded. The primary determining factor on whether or not a particular stock (and all its related flows and loops) needs to be included is whether or not that particular stock is going to have a substantial

42 Meadows and Wright, *Thinking in Systems*, 94.

43 Meadows and Wright, *Thinking in Systems*, 95.

44 Meadows and Wright, *Thinking in Systems*, 95.

impact on "the behavior of the system over the time period of interest."[45] Additionally, there is no single, correct boundary for a particular system. The boundaries will have to shift and be adjusted to fit the purpose of the system thinker. If the system model is too small, the system will surprise you because there are stocks, flows, and loops influencing the outcome that you have not accounted for.[46] If, however, the system model is too large and broad, the questions asked and answers sought by the system thinker is obscured by the mass of information, and the model loses its usefulness.[47]

Meadows states that "it's a great art to remember that *boundaries are of our own making, and that they can and should be reconsidered for each new discussion, problem, or purpose.*"[48]

Limiting Factors

The way a system behaves can also be shocking because our linear, event focused minds love to assume that a single cause brings about a single effect. "We like to think about one or at most a few things at a time. And we don't like, especially when our plans and desires are involved, to think about limits."[49] Limits act as the bottlenecks in the system's action. "It was with regard to grain that Justus von Liebig came up with his famous 'law of the minimum.' It doesn't matter how much nitrogen is available to the grain, he said, if what's short is phosphorus. It does no good to pour on more phosphorus, if the problem is low potassium."[50] The "concept of a limiting

45 Meadows and Wright, *Thinking in Systems*, 96.

46 Meadows and Wright, *Thinking in Systems*, 97.

47 Meadows and Wright, *Thinking in Systems*, 98.

48 Meadows and Wright, *Thinking in Systems*, 99. (Emphasis original)

49 Meadows and Wright, *Thinking in Systems*, 100.

50 Meadows and Wright, *Thinking in Systems*, 101.

factor is simple and widely misunderstood."[51] It is common practice for those operating within a system to apply the same fix over and over again, despite diminishing returns or a complete lack of improvement. This is a failure to recognize the factor that is bottlenecking the desired change in the system.

Furthermore, as systems advance and grow, the limits around them often change. If the system thinker does not adjust the points of contact where change is implemented in response to the changing dynamics, the entire system can suffer and even break apart. Every system is surrounded by layers of limits, which come out at different times and require different approaches to be addressed.[52] "Insight comes not only from recognizing which factor is limiting, but from seeing that growth itself depletes or enhances limits and therefore changes what is limiting."[53] "Whenever one factor ceases to be limiting, growth occurs, and the growth itself changes the relative scarcity of factors until another becomes limiting. To shift attention from the abundant factors to the next potential limiting factor is to gain real understanding of, and control over, the growth process."[54] However, knowledge and awareness of these limits do not immediately remove them, and no system can grow indefinitely.[55] "There will always be limits to growth. They can be self-imposed. If they aren't, they will be system-imposed."[56]

Delays

51 Meadows and Wright, *Thinking in Systems*, 101.

52 Meadows and Wright, *Thinking in Systems*, 102.

53 Meadows and Wright, *Thinking in Systems*, 102.

54 Meadows and Wright, *Thinking in Systems*, 102.

55 Meadows and Wright, *Thinking in Systems*, 102.

56 Meadows and Wright, *Thinking in Systems*, 103.

In addition to limits, systems also include inherent delays, many of which are longer than we expect them to be. "Every stock is a delay. Most flows have delays—shipping delays, perception delays, processing delays, maturation delays."[57] The delays that need to be included in your system model depend on the purpose of the discussion;

> If you're worrying about oscillations that take weeks, you probably don't have to think about delays that take minutes, or years. If you're concerned about the decades-long development of a population and economy, you usually can ignore oscillations that take weeks. The world peeps, squawks, bangs, and thunders at many frequencies all at once. What is a significant delay depends—usually—on which set of frequencies you're trying to understand.[58]

Understanding delays is extremely important for the system thinker and organizer because delays are often sensitive leverage points that can drastically transform the behavior of the system.[59] It is important to note, however, that delays are not inherently bad, and reducing the delay does not necessarily improve the function or the stability of the system. Delays that are either too long or too short may destabilize the entire system.

> If a decision point in a system (or a person working in the part of the system) is responding to delayed information, or responding with a delay, the decisions will be off target. Actions will be too much or too little to achieve the decision maker's goals. On the other hand, if action is taken too fast, it may nervously amplify short-term variation and create unnecessary instability. Delays determine how fast systems can react, how accurately they hit their targets, and how timely is the information passed around a system. Overshoots, oscillations, and collapses are always caused by delays.[60]

To properly manage and interpret delays, some level of foresight and planning is needed. Those who are organizing the system must take into consideration the effect that the delays in the system will have on their outcome.

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57 Meadows and Wright, *Thinking in Systems*, 103–4.

58 Meadows and Wright, *Thinking in Systems*, 104.

59 Meadows and Wright, *Thinking in Systems*, 104.

60 Meadows and Wright, *Thinking in Systems*, 104–5.

Bounded Rationality

The last not-so-obvious aspect of system models is called bounded rationality. "Bounded rationality means that people make quite reasonable decisions based on the information they have. But they don't have perfect information, especially about more distant parts of the system."[61] Regardless of how much careful attention we pay to the elements in the system and the minutia of the relationships and feedback loops, we can never model reality perfectly. There will always be some level of unpredictability. There will always be something else that got overlooked. This is simultaneously obvious and obscure. Humans tend to think they've got it all figured out. Once we finish our model, we use it and assume there's nothing more to add to it.

System Levers

System levers or leverage points are places within the system where pressure can be applied to effect a change to the system's behavior. Meadows identifies twelve levers, and orders them from least to greatest impact: numbers, buffers, stock-and-flow structures, delays, balancing feedback loops, reinforcing feedback loops, information flows, self-organization, goals, paradigms, and transcending paradigms.[62]

Numbers refer to the size of flows in the system and the parameters around those flows. Despite the focus that's placed on the numbers in real-world situations, there is very little leverage in them.[63] Meadows adds the caveat, though, that numbers and parameters gain leverage

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61 Meadows and Wright, *Thinking in Systems*, 106.

62 Meadows and Wright, *Thinking in Systems*, 147–65.

63 Meadows and Wright, *Thinking in Systems*, 148.

when "they go into ranges that kick off one of the items higher on this list."[64] But generally speaking, numbers will not spur on systemic change.

The buffer in a system refers to the relative size of the stock to the flows. The larger the buffer, the more rigid and resistant to change the system is.[65] A buffer that is too small is prone to rapid and large fluctuations, while a buffer that is too big makes the entire system inflexible and unable to respond quickly to any outside change.[66]

Meadows uses the term stock-and-flow structure to refer to the physical arrangement of the various parts of the system.[67] The stock-and-flow structure can produce meaningful change within the system, but the physical rebuilding of the system structure is often expensive and slow, thus it is not a powerful leverage point due to its cost and complexity.[68]

Delays as levers control oscillations. The delay has an impact "relative to rates of change in the stocks that the feedback loop is trying to control."[69] Delays that are too short produce overreactions, while delays that are too long cause "damped, sustained, or exploding oscillations."[70] Despite their large impact on a system, delays are not high on Meadows' list of leverage points because they are often difficult or impossible to change.[71]

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64 Meadows and Wright, *Thinking in Systems*, 149.

65 Meadows and Wright, *Thinking in Systems*, 150.

66 Meadows and Wright, *Thinking in Systems*, 150.

67 Meadows and Wright, *Thinking in Systems*, 150.

68 Meadows and Wright, *Thinking in Systems*, 151.

69 Meadows and Wright, *Thinking in Systems*, 152.

70 Meadows and Wright, *Thinking in Systems*, 152.

71 Meadows and Wright, *Thinking in Systems*, 152.

Balancing feedback loops can be implemented and strengthened to maintain the dynamic equilibrium of the system. To be effective, a balancing feedback loop's strength must be measured "relative to the impact it is designed to correct."[72] The stronger the disturbing effect, the stronger the balancing feedback loop must be to compensate.

Even stronger than balancing feedback loops are reinforcing feedback loops. Because of the self-compounding nature of reinforcing feedback loops, it may be necessary to inhibit their function to produce the desired results. If left unchecked, reinforcing feedback loops can become the source of not only growth, but also "explosion, erosion, and collapse" in a system.[73]

Even more impactful than feedback loops are information flows. An information flow refers to who does and does not have access to particular information within the system; they are often modified by adding a new feedback loop to the system.[74] Meadows says that "missing information flows is one of the most common causes of system malfunction. Adding or restoring information can be a powerful intervention, usually much easier and cheaper than rebuilding physical infrastructure."[75] As the popular saying goes, knowledge is power.

The rules under which a system functions are an increasingly higher point of influence within systems.[76] "Power over the rules is real power … if you want to understand the deepest malfunctions of systems, pay attention to the rules and to who has power over them."[77] If you change the rules of the system, you effect massive change on the entire system.

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72 Meadows and Wright, *Thinking in Systems*, 154.

73 Meadows and Wright, *Thinking in Systems*, 155.

74 Meadows and Wright, *Thinking in Systems*, 157.

75 Meadows and Wright, *Thinking in Systems*, 157.

76 Meadows and Wright, *Thinking in Systems*, 158.

77 Meadows and Wright, *Thinking in Systems*, 158.

A system's ability to self-organize, i.e. change the very structure of the system itself, is higher on Meadows' impact scale. She argues that self-organization does not have to be complicated to produce change, it only needs a set of extremely clever rules.[78] By creating a few clever rules that govern self-organization, the system thinker can cause the system to completely rewrite itself over time. Meadows states that "the intervention point here is obvious, but unpopular. Encouraging variability and experimentation and diversity means 'losing control.'"[79] For some people, the variableness of this leverage point is terrifying.

A system can also be influenced highly by redefining or refining its goals. If you can successfully change the goal of the system, you have steered the ship in a completely new direction. Meadows uses the example of Ronald Reagan's shift of the public discourse concerning the government.

> Reagan said over and over, the goal is not to get the people to help the government and not to get government to help the people, but to get government off our backs. … the thoroughness with which the public discourse in the United States and even the world has been changed since Reagan is testimony to the high leverage of articulating, meaning, repeating, standing up for, insisting upon, new system goals.[80]

Even more influential than its goal is the paradigm of the system—"the mind-set out of which the system arises."[81] Paradigms inform every single part of the system (e.g. flows, stocks, etc.), and they are harder to change than any other aspect of the system.[82] But, they can change in an instant, through a single individual who consistently points at the "anomalies and failures" in the old one, who keeps speaking and acting loudly and assertively from the new one, and who

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78 Meadows and Wright, *Thinking in Systems*, 159.

79 Meadows and Wright, *Thinking in Systems*, 160.

80 Meadows and Wright, *Thinking in Systems*, 162.

81 Meadows and Wright, *Thinking in Systems*, 162.

82 Meadows and Wright, *Thinking in Systems*, 163.

works with the active agents of change rather than responding to reactionaries.[83] Paradigms can be changed by building a model of the system we want to change because it takes us out of the system and "forces us to see it whole."[84]

Yet, there is one point of leverage higher than even paradigms: transcending paradigms.[85] This means "to keep oneself unattached in the arena of paradigms, to stay flexible, to realize that no paradigm is 'true.'"[86] Meadows does not have a full understanding of the truth of the universe, but the point here is that we cannot be married to any earthly paradigm or organization. The changing times will call for changing responses, and it will do us well to be aware of our own paradigms that we might evaluate them objectively.

System Traps: Ways it can All Fall Apart

System theory is not a silver bullet that will solve every problem, and it does come with its fair share of potential problems. Those who work within systems will be well served to be aware of the traps that come with system theory. By being mindful of how systems can take a turn for the worse, a foundational structure may be built to protect against the most common system traps. Having an early warning system against these traps will also allow the system thinker to respond and react to the behavior before it becomes systemic in the system being created, modified, or expanded.

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83 Meadows and Wright, *Thinking in Systems*, 164.

84 Meadows and Wright, *Thinking in Systems*, 164.

85 Meadows and Wright, *Thinking in Systems*, 164.

86 Meadows and Wright, *Thinking in Systems*, 164.

The most common and problematic system traps (as named by Meadows) are: policy resistance, the tragedy of the commons, drift to low performance, escalation, success to the successful, shifting the burden to the intervenor, rule beating, and seeking the wrong goal.[87]

The trap of policy resistance occurs when the various actors and elements within the system are attempting to pull the stock in their direction to achieve their own goals.[88] "Any new policy, especially if it's effective, just pulls the stock farther from the goals of other actors and produces additional resistance, with a result that no one likes, but that everyone expends considerable effort in maintaining."[89] The solution to the trap of policy resistance is to simply let it go. Meadows recommends you "bring in all the actors and use the energy formerly expended on resistance to seek out mutually satisfactory ways for all goals to be realized—or redefinitions of larger and more important goals that everyone can pull toward together."[90]

The system trap of "tragedy of the commons" occurs when there is a commonly shared resource that everyone can benefit from and must share the cost of abuse of the resource.[91] Since all the users share the cost of its abuse "there is very weak feedback from the condition of the resource to the decisions of the resource users. The consequence is overuse of the resource, eroding it until it becomes unavailable to anyone."[92]

This trap can be avoided by educating the users of the common resource about the effects of their abuse and exhorting them through positive and negative reinforcement to follow the

87 Meadows and Wright, *Thinking in Systems*, 112–41.

88 Meadows and Wright, *Thinking in Systems*, 116.

89 Meadows and Wright, *Thinking in Systems*, 116.

90 Meadows and Wright, *Thinking in Systems*, 116.

91 Meadows and Wright, *Thinking in Systems*, 121.

92 Meadows and Wright, *Thinking in Systems*, 121.

guidelines that are beneficial to all. In some circumstances, the feedback loop of the consequences of abuse can be strengthened by privatizing the resource so each individual has to deal with the direct consequences of their abuse, or by regulating access to the resource to all users, and potentially denying access to the worst offenders.[93]

The trap of "drift to low performance" occurs when organizers, leaders, and participants allow their performance standards to be influenced by past performance, "especially if there is a negative bias in perceiving past performance, [which] sets up a reinforcing feedback loop of eroding goals that sets a system drifting toward low performance."[94]

To avoid this drift to low performance, performance standards must be kept absolute.[95] Meadows suggests we "let standards be enhanced by the best actual performances instead of being discouraged by the worst. Use the same structure to set up a drift toward high performance!"[96] This would be following the advice of Chip and Dan Heath in their book *Switch* about discovering, examining, and mimicking the bright spots in order to find the best method.[97]

Meadows lists escalation as a system trap that occurs when "the state of one stock is determined by trying to surpass the state of another stock."[98] When this occurs, the system quickly develops into an exponential arms race and can tear itself apart. "The best way out of this trap is to avoid getting in it. If caught in an escalating system, one can refuse to compete

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93 Meadows and Wright, *Thinking in Systems*, 121.

94 Meadows and Wright, *Thinking in Systems*, 123.

95 Meadows and Wright, *Thinking in Systems*, 123.

96 Meadows and Wright, *Thinking in Systems*, 123.

97 Chip Heath and Dan Heath, *Switch: How to Change Things When Change Is Hard*, 1st ed. (New York: Broadway Books, 2010), 41.

98 Meadows and Wright, *Thinking in Systems*, 126.

(unilaterally disarm), thereby interrupting the reinforcing loop. Or one can negotiate a new system with balancing loops to control the escalation."[99]

The next trap present in system models is called "success to the successful" by Meadows.[100] This trap occurs when there is a reinforcing feedback loop present where the winners of a competition are rewarded with the means to win again; this inevitably leads to the winners eventually taking all and the elimination of the loser.[101]

In order to escape this trap, Meadows suggests "diversification, which allows those who are losing the competition to get out of that game and start another one; strict limitation on the fraction of the pie any one winner may win… policies that level the playing field, removing some of the advantage of the strongest players or increasing the advantage of the weakest; policies that devise rewards for success that do not bias the next round of competition."[102]

Within a system experiencing problems, it is easy for the burden to be shifted to the person intervening in the problem, rather than the problem source itself. Such "shifting the burden, dependence, and addiction arise when a solution to a systemic problem reduces (or disguises) the symptoms, but does nothing to solve the underlying problem."[103] Meadows says,

> If the intervention designed to correct the problem causes the self-maintaining capacity of the original system to atrophy or erode, then a destructive reinforcing feedback loop is set in motion. The system deteriorates; more and more of the solution is then required. The system will become more and more dependent on the intervention and less and less able to maintain its own desired state.[104]

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99 Meadows and Wright, *Thinking in Systems*, 126.

100 Meadows and Wright, *Thinking in Systems*, 130.

101 Meadows and Wright, *Thinking in Systems*, 130.

102 Meadows and Wright, *Thinking in Systems*, 130.

103 Meadows and Wright, *Thinking in Systems*, 135.

104 Meadows and Wright, *Thinking in Systems*, 135.

The way out of this particular system trap is to avoid it outright. “Beware of symptom-relieving or signal-denying policies or practices that don’t really address the problem. Take the focus off short-term relief and put it on long-term restructuring.”[105]

Anytime rules govern a system, the system can fall into the trap of “rule beating.”[106] “Rule beating” refers to any activity that strives to give the appearance of compliance with the stated rule, but works against the goal of the stated rule.[107] The way to avoid this trap is to redesign the rules in such a way to “release creativity not in the direction of beating the rules, but in the direction of achieving the purpose of the rules.”[108]

The last system trap that Meadows identifies is seeking the wrong goal.[109] She writes, “System behavior is particularly sensitive to the goals of feedback loops. If the goals—the indicators of satisfaction of the rules—are defined inaccurately or incompletely, the system may obediently work to produce a result that is not really intended or wanted.”[110]

This trap is avoided by specifying “indicators and goals that reflect the real welfare of the system. Be especially careful not to confuse effort with result or you will end up with a system that is producing effort, not result.”[111]

Limitations of Systems

105 Meadows and Wright, *Thinking in Systems*, 135.

106 Meadows and Wright, *Thinking in Systems*, 137.

107 Meadows and Wright, *Thinking in Systems*, 137.

108 Meadows and Wright, *Thinking in Systems*, 137.

109 Meadows and Wright, *Thinking in Systems*, 140.

110 Meadows and Wright, *Thinking in Systems*, 140.

111 Meadows and Wright, *Thinking in Systems*, 140.

For system theory to be useful to us, we have to draw boundaries around it. We have to decide to stop at some point, lest the model loses its usability. Additionally, every model will be incomplete, because there may be information we lack, and there will always be another step, another feedback loop, another stage that we could add. Systems do not exist in vacuums, but our models have to draw their boundaries somewhere.

APPLICATION OF SYSTEMS TO THE CHURCH

The reality of the system theory model, with its focus on the interconnectedness of all the elements, is a central part of God's organization of the church, the metaphors ascribed to the church, and our Lutheran heritage. This section will address the biblical basis for system theory, the church as an emotional system, and will provide some examples of aspects of systems and system traps in the church.

Biblical Basis for System Theory

The primary assumption of system theory, that everything is interconnected, is a biblical truth. Everything is tied together by the providence in God. St. Luke recorded Paul's speech in Athens in Acts, "From one man he made all the nations, that they should inhabit the whole earth; and he marked out their appointed times in history and the boundaries of their lands. God did this so that they would seek him and perhaps reach out for him and find him, though he is not far from any one of us. 'For in him we live and move and have our being'" (Acts 17:26-28, NIV). We do not act apart from God. In all things, God is right next to us. Steinke says, "God is apart from and a

part of human life. God is separate from us and close to us; God is hidden and near."[112] The hidden God decides to work through earthly means like weather, relationships, and the governments of the lands to ensure that his will is carried out and that those who are chosen will believe. No believer is ever cut off from God or other believers.

The Body of Christ

The reality of the Christian Church is that we, as a group of believers, are greater than the sum of the parts. Paul Stevens recognized that in families and churches, "every member affects, and is affected by, every other member."[113] Paul describes this relationship among all believes as a body. Let us dive into his discourse on the body of Christ in 1 Corinthians chapter twelve.

> **12** Just as a body, though one, has many parts, but all its many parts form one body, so it
> is with Christ. **13** For we were all baptized by one Spirit so as to form one body—whether
> Jews or Gentiles, slave or free—and we were all given the one Spirit to drink. **14** Even so
> the body is not made up of one part but of many.
> **15** Now if the foot should say, "Because I am not a hand, I do not belong to the body," it
> would not for that reason stop being part of the body. **16** And if the ear should say,
> "Because I am not an eye, I do not belong to the body," it would not for that reason stop
> being part of the body. **17** If the whole body were an eye, where would the sense of
> hearing be? If the whole body were an ear, where would the sense of smell be? **18** But in
> fact God has placed the parts in the body, every one of them, just as he wanted them to
> be. **19** If they were all one part, where would the body be? **20** As it is, there are many parts,
> but one body.
> **21** The eye cannot say to the hand, "I don't need you!" And the head cannot say to the
> feet, "I don't need you!" **22** On the contrary, those parts of the body that seem to be
> weaker are indispensable, **23** and the parts that we think are less honorable we treat with
> special honor. And the parts that are unpresentable are treated with special
> modesty, **24** while our presentable parts need no special treatment. But God has put the
> body together, giving greater honor to the parts that lacked it, **25** so that there should be no
> division in the body, but that its parts should have equal concern for each other. **26** If one
> part suffers, every part suffers with it; if one part is honored, every part rejoices with it.
> **27** Now you are the body of Christ, and each one of you is a part of it. **28** And God has
> placed in the church first of all apostles, second prophets, third teachers, then miracles,

112 Steinke, *How Your Church Family Works*, 118.

113 R Paul Stevens, "Analogy or Homology? An Investigation of the Congruency of Systems Theory and Biblical Theology in Pastoral Leadership," *J. Psychol. Theol.* 22.3 (1994): 2.

> then gifts of healing, of helping, of guidance, and of different kinds of tongues. **29** Are all apostles? Are all prophets? Are all teachers? Do all work miracles? **30** Do all have gifts of healing? Do all speak in tongues? Do all interpret? (1 Co 12:12-30)

The metaphor of a body is strongly aligned with system theory. Verse twelve states the basic assumption of system theory—that the elements mutually influence each other and the whole is greater than the sum of the parts. The church is not one singular entity, it is a combination of many different parts working in tandem. To move a body from point A to point B, the neurons in the brain must send the instructions to the motor cortex, where the signal gets sent out through the spinal cord to the relevant muscles. Those muscles then work in tandem with each other and exert pressure on the tendons, which exert pressure on the bones in turn. As our bones move, the ligaments hold our joints together and the cartilage protects our bones from damage. Additionally, a whole host of auxiliary stabilizer muscles engage to keep the body in the correct position and alignment during the movement. Muscles consume the energy produced by the chemical reaction of sugar and oxygen producing ATP in the mitochondria. The muscle receives the glucose and oxygen from the blood being pumped through it by the heart. The complexity goes on and on. Even as simple a movement as typing out words on a page involves a great number of elements that all provide each other with information through feedback loops, ensuring that the action is completed and homeostasis is maintained. In the same way, the church's actions are a combination of many moving parts, each of which is a complicated system all on its own. Each human element in the church is not only a biological system but an emotional and spiritual one as well. The emotional state of each individual within the system can influence the entire system, for better or for worse, just like a deviant element in the body's physiology can cause the death of the entire organism.

System models require that you draw the boundary of the system somewhere in order to keep the diagram manageable and understandable. This also applies to the metaphor of the body that Paul uses. By maintaining the boundary around the body as the limit of the system of believers, he has set forth his scope and purpose for his discussion. He was aware of several outside factors that were affecting the church: the pervasiveness of sexuality in the Corinthian culture, the oppression by the Roman government, the opposition by the Jewish leaders, and many more factors. But he wants to focus on the relationship of believers with one another within the church. To address problems of favoritism and jealousy, Paul has to limit his discussion in a great example of boundaries determined by his purpose. His boundaries reveal his purpose and allow us a glimpse into his view on how the church should interact. He could have simply said that the church was a body and left the metaphor at that, but he explained in more detail to draw out all the details and to open the Corinthian's eyes to what was going on. There were parts of the system that were under-valuing their role in the whole, and this led them to be jealous of the "more important" (at least in their view) members of the church. There was favoritism being shown on account of this, as members of the body strove to impress and influence each other, rather than work for the good of the whole.

The favoritism of the Corinthian congregation was an example of suboptimization. The individual members were more interested in being honored as important and building their own social influence than they were about the function of the church as a whole. The social subsystem was striving to achieve its own goals of success and favor at the detriment of the entire system, the whole body of believers in Corinth. This suboptimization also led to the attitude among the believers that some of them were not needed or wanted within the church.

Paul rejects this idea as false, saying, “The eye cannot say to the hand, ‘I don’t need you!’ And the head cannot say to the feet, ‘I don’t need you!’” (1 Co 12:21). The individual members of the church could not rightly proclaim that other members weren’t necessary. The members of the church couldn’t see the bigger picture, but God had placed all of them there exactly where he needed them to be. They each had a role to fulfill, but they didn’t all fulfill the same role. Each believer in the church had a specific function and office to fulfill, just like different feedback loops accomplish different goals for the good of the system. Some of them reinforce the behavior of the system to its benefit, and others reinforce the behavior to its detriment. Still other loops strive to return the church to the status quo. Every kind of feedback loop exists within the church, and by recognizing those who comprise each kind of loop and what role they play in them, the leaders in the church will be better able to influence the body and lead churches through necessary change.

In the body metaphor, Paul also points out that “if one part suffers, every part suffers with it; if one part is honored, every part rejoices with it” (1 Co 12:26). In a literal body, this is true. If you are on a dinner date with your significant other, and they complement your eyes, it is not just your eyes that rejoice. Your cheeks may blush, and your heart may beat faster. Your brain releases oxytocin and your entire being feels good about the compliment. In the same way, when one member of the metaphorical body of Christ is honored, the entire body—including Christ as the head—is honored with them. In times of joy, this acts as a reinforcing loop, leading the whole body to celebration joy and trampolines them into God’s presence, giving them a glimpse of the heavenly joy and leading them to perform the duties of the church with optimism and joy. In times of trouble, hardship, and suffering, the mutual bearing of burdens acts as a balancing loop to lift up the brother or sister who is struggling and to restore them to the proper joy in the

Lord. It is a thousand times easier to bear a heavy burden when you have friends around you to help you through it. The other elements in this system influence the struggle of the one element, who, in turn, can influence their walk with the Savior and service within the body. The body is a very apt metaphor that showcases the connectedness of all Christians.

Vocations and Systems

The metaphor of the body used by Paul is the basis of the system of vocations that was taught by Martin Luther. Luther taught, with Paul, that all are priests. "In tearing down this wall, Luther did not eliminate priests or do away with the priesthood. Instead, he eliminated the laity! *All* are holy, *all* are spiritual and have a special call from God to faith and witness, the call to do whatever they do in church and society as priests of the Most High."[114] Since all believers are called members of the body, they all perform some function of the body, i.e. the church. No believer can simply exist within the body; all have a function to serve. Ministers of the Gospel are called to be the mouth of the body, proclaiming God's Word to the world. Others are called to be the feet of the body: to carry the Gospel to far places. Others are called to be the hands of the body: doing the work of the church in teaching, administration, or any other innumerable ways. And in it all, every believer is called to see everything they do as a way of bringing honor to God. This call extends to the everyday, menial tasks we do such as: making our bed, cleaning the house, doing the dishes, laboring in a factory, and taking out the trash. No job or occupation is below the vocation of the universal priesthood. This fact recognizes every believer's every action as another manner of praising God and honoring the body. The teaching of vocation by Luther is a full application of the system principle that every element is important and plays a

114 Karlfried Froehlich, "Luther on Vocation," *Lutheran Q.* 13.2 (1999): 201.

vital role, even if it's not immediately (or ever) obvious. Simply because it seems like a task or element is insignificant doesn't mean it actually is. Both new life and deadly cancer start with only a single cell. The function of every element in this metaphorical body is important.

Understanding the vocation of the pastor is especially important in recognizing his role in system theory and the church. The pastor is not the sole actor in the ministry of the congregation where he serves as under-shepherd. Generally, the congregation in his care existed before him and will outlive him. What, then, is the primary role of the pastor? What part of the body is he? The pastor is certainly called to do his own personal ministry. However, the pastor fills a special role. As a highly trained individual and leader of the flock, he has a responsibility to train those in his care. His goal should be to better equip the members of his flock to perform the duties of the body of Christ, i.e. carry out the Gospel ministry. He needs the ability to recognize the various gifts that God has given to others in his congregation that could be better utilized for the good of the Kingdom of God.

In a system diagram, the stock we are currently addressing would be the ministry of the church. In many cases, the vast majority of that stock is made up of work done by the pastor(s). Then, when the pastor accepts a call outward, retires, or dies, the ministry of the church suffers greatly. If we remove the pastor from the ministry of the church and place him into a feedback loop of instruction, the flow of participants into the ministry of the church will grow. As more people become involved in the ministry of the church, it will not only be multiplied in the present, but the people will be prepared to continue the ministry after the pastor is gone. Rather than the stock rapidly depleting, it will remain mostly constant, as the feedback loops that include those who were trained and equipped will remain in place and the ministry will carry on.

It is my hope that the church of God can continue on in the absence of a pastor. I do not think pastors will ever become obsolete, but I think a shift of focus away from the mindset that the pastor is responsible for one-hundred percent of the ministry of the church to seeing his primary role as the man equipped to equip the members of the church to participate in their ministry will be beneficial to both the local congregations and the church as a whole.

Another way in which the role of the pastor as equipper empowers the church is by activating dormant elements (i.e. people) who have different gifts than him. When the ministry of the church is carried out primarily by a single individual—the pastor—it tends to take on the strengths and weaknesses of that pastor. The longer the pastor stays at a congregation in the role of primary ministry-doer, the more concretely the congregation will adopt his weaknesses as its own. By stepping back and into the role of equipper, the pastor protects the congregation from ingraining his weakness in its DNA, and he activates the gifts the Lord has granted to the church that have lain dormant. I'm certain that any pastors reading this can think of at least one individual in the congregation in whom they see gifts that are not being utilized. The beauty of this situation is that it doesn't matter what the gifts are, they can still be used for the benefit of the church because of the reality of vocations. Not everyone is going to be stellar at canvassing. Some people are too shy and uncomfortable going door to door. But that doesn't mean they can't serve. They are simply a different part of the body. It is important that the pastor takes a step back and looks for the gifts his flock has. He should examine what God has given them, not lament over what God has not given them. Rejoice and celebrate their strengths, don't rag on their weaknesses. The Lord of the church knows exactly what his body needs, and he has given it that. Understanding the church from the systems perspective, the pastor and other leaders will

seek to find the hidden gifts among the members and construct systems in their churches that help reveal them.

We might consider 1 Peter 2:5, “you also, like living stones, are being built into a spiritual house to be a holy priesthood, offering spiritual sacrifices acceptable to God through Jesus Christ.” Peter is speaking to a body of believers with a variety of gifts. He calls them “living stones,” not “living bricks.” Bricks are uniform and form neat little corners that we can fit into perfectly clean boxes, mental or otherwise. But stones come in all kinds of shapes and sizes. They don’t fit together perfectly but are held together with mortar to achieve the purpose of the whole. In this case, the purpose is to be universal, holy priests whose sacrifice of works is pleasing to God through Jesus Christ. The variety of gifts among the body of Christ is not an accident, rather it is purposeful and beneficial. As Paul said, “If the whole body were an eye, where would the sense of hearing be? If the whole body were an ear, where would the sense of smell be? But in fact God has placed the parts in the body, every one of them, just as he wanted them to be. If they were all one part, where would the body be?” (1 Co 12:17–20). The diversity of the systematic church is its beauty. Steinke notes that "many parallels exist between 'system thinking' and the biblical record. Most notable is the interrelatedness of all things ... Trinitarian faith, for instance, sees all reality in relationship. God is three *separate* persons—the Father, the Son, and the Holy Spirit—yet *one*. Boundaries make them distinct. The historic creeds of the church indicate that the three persons of the Trinity are not fused. There is diversity in unity."[115]

Churches as Emotional Systems

115 Steinke, *How Your Church Family Works*, 117. (Emphasis Original)

Murray Bowen's theory of family systems was a revolutionary step in our understanding of how humans relate to each other. Bowen anchored his theory on the belief that the human family is "a particular kind natural system called an emotional system."[116] Kerr goes on to explain that an emotional system, defined broadly, "enables an organism to receive information (from within itself and from the environment), to integrate that information, and to respond on the basis of it."[117]

The Church's Anxiety

The church has always experienced anxiety. Among the early church, as their numbers started to grow, widows were being overlooked in the daily distribution of food (Acts 6:1). Later on, the believers in Corinth were arguing and fighting over who was following the 'best' apostle. They had divided themselves into camps of followers of Paul, Apollos, Cephas, and Christ. The congregation was divided and full of conflict (1 Co 1:11–13). Jude warned his hearers about unbelievers who had slipped in among them who were grumbling and pointing out others' flaws. These people were causing stress and anxiety in the church (Jude 16). The early church was full of stress and anxiety. Paul gave warnings: against hatred, discord, dissensions and factions (Gal 5:20), against grumbling and arguing (Phil2:14), and against godless talk (1 Ti 6:20). For a church united in the body of Christ, there were a lot of divisions. "Members of the first Christian communities had to contend with both bickering groups and, individually, their own anxiety."[118]

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116 Michael E. Kerr and Murray Bowen, *Family Evaluation: An Approach Based on Bowen Theory*, 1st ed. (New York: Norton, 1988), 26. (Emphasis Removed)

117 Kerr and Bowen, *Family Evaluation*, 27.

118 Steinke, *How Your Church Family Works*, 24.

When a system deals primarily with individuals, as church systems do, Steinke argues that it is beneficial to view the system as an emotional system. He writes, "In an emotional system there is always… information (a reaction and a response) and… the struggle to be self-defined and yet in touch with others."[119] The individual members of the church want to belong to the church, yet they don't want to lose themselves among their fellow church-goers. Yet, in many churches, certain members over-bond with the church, and thus emotionality takes over their way of thinking. When issues inevitably arise due to the lack of boundaries, churches suffer. The length at which they suffer depends on how they address the issue. If those involved have a linear, cause and effect framework of solving problems, the direct symptom may be resolved, but the underlying issue will not be addressed. This will lead to more problems cropping up down the road stemming from the subtle issue of those who lack self-differentiation from the church group.

On the other hand, a leader who approaches the problem from a system thinking framework will step back to see beyond the immediate symptom. He or she will recognize that the symptom is the result of anxiety landing somewhere, even though the anxiety might not be at all related to the current issue. If an individual is chronically anxious and is unable to self-differentiate from the system of the church, they will seek to relieve their anxiety in the church, often without any regard for other people or what is best for the organization in the long haul.

> Basically, chronically anxious people have a low threshold for pain. This is why they are in the forefront of the effort to secure immediate relief. They hanker for answers and comfort. Threatened, they make demands, spread rumors, exaggerate circumstances, claim injustice— whatever it takes to lessen their anxiety. Governed by instinct rather than insight, they cannot be stopped by reasoning or appeasing.[120]

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119 Steinke, *How Your Church Family Works*, 12.

120 Steinke, *How Your Church Family Works*, 22.

As long as the underlying issue of anxiety in the individuals is not addressed, it will continue to crop up in various ways time and time again.

It is therefore important for the leaders to be able to self-differentiate themselves from the system in order to develop a wider view of the problem and identify the core issues behind it. By managing the amount of anxiety, we promote good health for all those involved. Removing the anxiety is not the goal, but managing it is. "Anxiety provokes change. It prods and pushes us toward innovation or transformation. If, however, it reaches a certain intensity, it prevents the very change it provokes. What is stimulus becomes restraint. We 'lose our head' or 'cool,' as we say, essentially our awareness and composure; we are too reactive to be responsive."[121]

It is important for church leaders not to over-bond with the system, but to rather remain healthily self-differentiated. "The ideal of self-differentiation is to define self to others, stay in touch with them, and, even though there is tension between the two positions, manage whatever anxiety arises."[122] By managing the anxiety that arises in the system, the church leader will promote health and growth, both for the system as a whole and for the individuals within the system.

Steinke argues that family systems theory can be applied to the church because the church is an emotional system, and “regardless of the context, emotional processes are the same. In fact, these processes become more intense when we are dealing with what lies close to the heart and the meaning of life. When we invest ourselves significantly in a relationship system, emotionality rises to the surface quickly and forcefully."[123] He, along with the body of

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121 Steinke, *How Your Church Family Works*, 14. (Emphasis Removed)

122 Steinke, *How Your Church Family Works*, 29.

123 Steinke, *How Your Church Family Works*, 25.

psychological research,[124] recognizes that "Anxiety not resolved in one relationship will be focused in another relationship."[125]

When speaking about resolving issues, Steinke writes, "One of the most effective ways to introduce change is to redefine the problem—to see the whole pattern of interaction."[126] Steinke seems to have latched onto the same idea as Meadows in her list of levers: stepping back and observing the whole system is one of the most impactful ways of making change.[127]

Brief Examples of a Systematic View of the Church

This section will provide some examples of systematic attributes at work within the church.

Hierarchy

Within the system of church structure, the teams of volunteers working with the Evangelism subsystem share more information and are more closely related to each other than they are to members of the worship group/committee. Members of the worship may need to adapt their practices if the evangelism team is bringing in a dozen new visitors every week, but their relationship to the evangelism team subsystem is much more limited than the evangelism team subsystem's intrarelationship as they plan and execute evangelism strategies.

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124 Kerr and Bowen, *Family Evaluation*, 135; James R David, "The Theology of Murray Bowen or the Marital Triangle," *J. Psychol. Theol.* 7.4 (1979): 260.

125 Steinke, *How Your Church Family Works*, 47.

126 Steinke, *How Your Church Family Works*, 52.

127 Meadows and Wright, *Thinking in Systems*, 163.

For example, the treasurer doesn't need to know how many evangelism calls were made last week, and the worship group doesn't need to know how many elder's calls were made. Such information does not benefit their work and could distract them from their assigned duties.

Suboptimization

If a Church council member refuses to support the replacement of a damaged piano because their relative donated it years ago, the worship life of the entire congregation may suffer and stagnate.

Too much central control

If a pastor feels the need to be personally involved in every single decision made within the church, the entire ministry of the church will be limited by his abilities.

False Boundaries

Members of the holy ministry of the church must the idea of fluctuating boundaries in mind. If they maintain a particular organizational structure simply because that's the way it's always been done, their rigidity may doom their efforts. It is necessary, for the health of the church and the ministry, for leaders in the church to consciously evaluate the boundaries of the system models as they strive to ascertain the condition and effectiveness of the many functions of the church.

Limiting Factors

In a small mission congregation, the initial limit on evangelism might be the small amount of manpower available to knock on doors in the community. As the congregation grows and more people get involved with evangelism, the limiting factor may no longer be the manpower, but the

lack of training in how to evangelize. Or, the limiting factor may become the difficulty of coordinating a larger group due to the lack of a system of communication and organization.

Delays

For evangelism teams, there may be a delay of months or years before the people contacted by the team become regularly attending members of the church. If this delay is not anticipated, the evangelism team may give up too early, or it may conclude that the methods are simply not working because the results are not immediate. Furthermore, small budget fluctuations may be blown out of proportion because of panic over short term oscillations in offerings received. If the treasurer (or a council member) panics every time that the weekly offering is lower than needed to meet budget, anxiety will dominate the system, and good programs will be needlessly restricted financially. A proper and healthy understanding of delays will allow the leaders of the congregation to maintain stability and resilience despite small oscillations and changes. Furthermore, being aware of the delays, and their potential length variety, enables the leaders of the congregation to better predict the outcomes of the systems in place and adjust accordingly if results are harmfully outside those boundaries. Beyond delays, there is the added difficulty of the work of the church being a spiritual matter that often flips the world on its head and doesn't follow the rules all the time because it follows God's will. Delays are not the end-all-be-all of solving outreach problems, but recognizing them does enable leaders to maximize their impact and ensure that they are giving God their first and best.

Bounded Rationality

One particular area that belongs in almost all system models of the church is the study of God's Word. Its presence (or lack thereof) needs to be considered when adjusting, leading, and executing actions with every system of the church, including in the pastor's individual ministry and general well-being. No ministry of the church can succeed outside the providence and blessing of God, and the church's ability to fulfill its role faithfully and to the best of its ability is directly linked to its devotional life. To ignore the impact that devotions have on the system would be to ignore the activity and blessing of God on the success of the system as a whole. This applies to the church council, evangelism, treasury, worship, choir, elders, fellowship, ushers, greeters, nursing home ministry, and maintenance, to name a few. In my opinion, every function of the church should begin and end with a devotion (or devotional thought) and a prayer. This will not only directly impact the function being performed, but also the faith life of the individuals performing the task at hand.

Systems Traps in the Church

This section will present examples of the system traps as they present themselves in a congregational setting

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Policy resistance

Policy resistance happens when the stock of the system is being pulled in multiple directions. In the church, policy resistance could occur in a Worship Group. If each of the three members of the worship group have a preferred style of worship that they consider to be the 'correct' way to worship, they are all attempting to pull the stock (worship style) in their own direction without regard for how it is affecting the visitor experience and the worship life of the average member.

If the Pastor declares they are going to start emphasizing style A, the proponents of styles B and C will pull even harder against style A, increasing the amount of energy used and frustration created within the Worship group.

Tragedy of the Commons

The tragedy of the commons is when a common resource is abused due to the weakness or absence of balancing feedback loops against those who abuse it. The tragedy of the commons trap might occur in a congregation that has a church library. The library is a common resource used by all the members. If a single book is lost, the effect on the overall library is small. However, without a system of regulation and accountability in place, more and more books may lie unreturned or be lost for good until access to the library is removed for fear of losing the few books remaining.

Drift to Low Performance

Drift to low performance is marked by a decrease in expectations and activity until the program is abandoned. This trap could easily occur in an Evangelism team. If the team starts with the stated goal of making 30 personal evangelism calls in the first month but only 15 get made. When they reconvene, they decide that maybe they were too ambitious, so they set their new goal at 20 per month. At their next meeting, they report that only 10 visits were made because of scheduling circumstances. The team doubles down on the goal of 20, but in their hearts, they are feeling the weight of not meeting the goals in the first two months. As they go about their work in the following months, the numbers continue to decrease, and eventually, the entire Evangelism team peters out and breaks up, concluding that maybe evangelism just isn’t for them.

Escalation

Escalation is a series of growing and intensifying negative actions between two opposed actors in the system. In the church, escalation could occur on the church council when two members disagree with the direction to take on a project. Initially, it is just a verbal disagreement between them, but it can quickly become a divisive issue for the entire congregation.

Success to the Successful

Success to the successful occurs in the presence of unchecked positive feedback loops that cause those who 'win' to continue to 'win.' This trap could lead to the entrenchment of particular trends within the church, regardless of whether or not those trends are currently serving the benefit of the church. Once one side wins out entirely, it becomes "the way we've always done it," and a part of the DNA of the culture. Any change or opposition to this is quickly oppressed by the winning side, and frustration can quickly grow among the drives of change at the stubbornness of the 'old guard.'

Burden shifting

Burden shifting places the responsibility for change on the system thinker who is advocating change rather than on the individuals within the system itself. In the church system that is struggling, the initial solution might be the direct intervention of the pastor to solve the issue (regardless of what it is). He takes matters into his own hands and the issue at hand is resolved. However, the underlying cause of the issue is not addressed. So the next time the issue surfaces again, it may have a different appearance, but it is still the same unresolved issue. This leads to a

cycle of pastoral intervention until eventually the pastor is carrying every task on his shoulders and the church can't seem to get anything done without him.

Rule Beating

Rule beating occurs when a rule can be technically followed, but doing so acts contrarian to the goal of the system. For example, the organization and focus of the evangelism team of a mission congregation might increase the number of door hangers and decrease the number of door knocks in order to increase the number of "visits" they can report to the Mission Board. Because the Mission Board is interested in the number of visits above the quality of the visits, it may push the behavior of the evangelism system away from a model that brings people into the church and into a model that increases the number of visits reported.

AN INCOMPLETE PUZZLE: AREAS FOR FUTURE RESEARCH

The points made earlier about member ministry are conjecture at this point. To see the impact of a systematic approach to member ministry, consult "Do Not Neglect the Gift you Have: the Blessings and Challenges of Equipping Ministry" by Christopher Johns.[128] Further research on the effectiveness of system theory's application to member ministry and church organization would expand the literature on them.

Additionally, it would be worthwhile to pursue research to discover the effectiveness of system theory concerning the role of the pastor as an equipper. It would be especially interesting

128 Christopher Johns, "Do Not Neglect the Gift You Have: The Blessings and Challenges of Equipping Ministry," 2017, https://essays.wls.wels.net/handle/123456789/4306.

to see if a systematic approach to equipping members to take ownership of the ministry better enables the church to function beyond the tenure of the pastor there.

Further research will be necessary to determine the relationship between a system theory approach to church organization, equipping ministry, and the resilience of a pastor-less church.

CONCLUSION

Within this paper, I have demonstrated that system theory is compatible with biblical theology and can be beneficial to the Lutheran Church as a model for congregational organization and structure. System theory is one potential solution to the challenges of equipping ministry and congregational participation in the ministries of the church. May this paper add to the body of work already done, and spur others on to continue research into the field of systems and the church.

S. D. G.

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