# Metabolizing "The Word": Exploring Cognition, Narratology, and the Embodiment of Scripture

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## Introduction

Recent interdisciplinary conversations between the fields of the brain sciences and literary theory have resulted in new insights about how our bodies perceive and function in the world through narrative. Using these advancements as a springboard, I will show how they relate to Scripture—and precisely Jesus' reference to "the word" in Matthew 4:4—as being capable of embodied nourishment. To this end, I will make extensive use of recent neuroscience research which suggests a distinct neurological connection between the neurohormone ghrelin, typically involved with appetite and energy metabolism, and learning and memory.

I argue that these revelations of cognitive science and neuroscience can offer new insights about Jesus' claim regarding the nourishing potential of "the word*"* by closely examining its physiological possibilities. Coupling this research with the work of literary theorist Ellen Spolsky, who develops a theory of narrative as cognitive metabolism, I make a case for a hermeneutic of metabolic narratology that offers new ways of viewing specific biblical verses and theological claims by considering their physiological potential. This hermeneutic ultimately generates space for greater interdisciplinary discussions between biblical studies and science while examining ideas of narrative physiology.

## "The Word" in Verse

In Matthew 4:4, when Satan tempts Jesus by suggesting he turn a rock into bread to satisfy his aching hunger after fasting for 40 days, Jesus answers, "It is written: 'Man shall not live on bread alone, but on every word that comes from the mouth of God.'"[1] It would appear as if Jesus is saying that material food can only partially sustain human life and cannot completely satisfy hunger. In other words, instead of seeking purely material nourishment, humans need to cultivate and seek to satisfy a deeper "hunger" that only God's "word" can fulfill. Many exegetes argue that the response is meant to be a grand example of his spiritual humility and closeness to God the Father.[2] The problem with this abstracted reading, however, is that it avoids the materiality of the bread and the starvation of Jesus' body at the time. Is God's "word" truly capable of sustaining a human body and satisfying hunger in the way the material and chemical makeup of bread does? And why bread and not wine, honey, or locusts?

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[1] All biblical quotations, unless otherwise noted, are from the New American Standard Bible.

[2] Donald A. Hagner, *Word Biblical Commentary Vol. 33a, Matthew 1-13* (Nashville: Thomas Nelson, 1993) 60–70; W. F. Albrecht and C. S. Mann, *Matthew* (New Haven: Yale University Press, 1995), 33–36.

According to biblical scholar Juliana Claassens, bread was considered by the Israelites to be one of the four basic elements for living.[3] Furthermore, the relation between bread and God's "word" is found extensively throughout the Bible. She writes that bread "is understood not only to denote physical food, but comes to signify teaching or learning…[B]read as basic sustenance is used to express the view that learning is as necessary for life as bread and water."[4] That Jesus would use this particular material nourishment is important, but unsurprising. But is Jesus using "bread" as a stand in for "teaching" or "learning"?

Narrowly defined, this interpretation of bread as teaching or learning adds a level of circularity to the verse that ignores the carnal suffering of Jesus' body as it craves the alleviation of its hunger (or else Satan's proposal to change a rock to bread would not have been a temptation). Is there a way Jesus can have his bread and eat it too? Or, rephrased: what is this "word" and how can it sustain life *and* satisfy the hunger of physical bodies? To answer this question, we turn specifically to the portions of the biblical text that contain the lexeme that comes to be translated as the English "word."

## "The Word" in Matthew 4:4 and Deuteronomy 8:3

The two common lexemes translated as "word" in the biblical Greek are *logos* and *rhēma*.[5] The former, *logos,* which typically refers to the Scriptures or the Word of God as a theological concept, is the more common of the two lexemes which makes Matthew 4:4's use of *rhēma somewhat surprising*. The lexeme, *rhēma*, is associated with things explicitly spoken by God, such as "[p]ronouncements of (Christian) teaching or of divine understanding"[6] or, more broadly, any form of speaking or discourse.[7] The "word" in Matthew 4:4 is a spoken one directly from the mouth of God. What makes this particular translation most interesting is that both *logos* and *rhēma* converge on the common available translation of "utterance." This translation, 'utterance', is further highlighted by its direct connections to the Hebrew lexeme used to translate "word" in the Deuteronomical verse that Jesus is quoting.

Like its Greek counterpart in Matthew 4:4, Deuteronomy 8:3 does not use the most common Hebrew lexeme for "word," which is *dāḇār* (translated as "thing" or "word").[8] Instead it uses the less common *môṣā*, which means "utterance." If an "utterance" can be tied to a communicative act in which knowledge is transferred,[9] requiring at the very least an association between speaker and receiver, it could be argued that when Jesus quotes from Deuteronomy he is talking about a specific transference of knowledge about and from God from somewhere other

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[3] Juliana Claassens, "Bread," in *New Interpreter's Dictionary of the Bible,* Volume 1 (Nashville: Abingdon Press, 2006) 497.

[4] Ibid., 499.

[5] Walter Bauer and Frederick William Danker, eds., *A Greek-English Lexicon of the New Testament and Other Early Christian Literature* (Chicago: University of Chicago Press, 2001).

[6] Paul N. Anderson, "The Word," in *New Interpreter's Dictionary of the Bible,* Volume 5, (Nashville: Abingdon Press 2006), 895.

[7] Ibid., 898.

[8] Francis Brown, S. R. Driver, and Charles A. Briggs, eds., *The Brown-Driver-Briggs Hebrew and English Lexicon* (Oxford: Clarendon Press, 1906), n. 1696.

[9] Even cries and grunts convey certain information to the hearer.

than the written word. This is important because, as Claassens points out, "Within discourse, the impact of utterance is not conveyance of sound but the transmissions of meaning. Between humans, words pose the means by which understandings are expressed and received. Between God and humans, communication happens neither by sound nor audition, but by listening, discerning, and responding."[10] Subsequently, it is safe to conclude that in Matthew 4:4, Jesus is saying that an utterance, or "transference of knowledge" from God via "word*"* is more nourishing than material bread alone. This translation still does not resolve the problem of whether or not the "word" (i.e., a transference of knowledge) can nourish anything other than abstract ideas, but it does bring us a step closer. The next step, then, is to examine more fully how this concept and process plays out in Scripture itself.

## "The Word" as Nourishment

In considering the nourishing potential of Scripture, one must turn towards verses that, at least on the surface, speak explicitly about knowledge and information as food and its impact on the body. Examples can be found as early as the Eden story in Genesis where knowledge is enmeshed with material nourishment. The temptation account of Adam and Eve concerns knowledge linked to a fruit that would make them like God:

> When the woman saw that the fruit of the tree was good for food and pleasing to the eye, and also desirable for gaining wisdom, she took some and ate it. She also gave some to her husband, who was with her, and he ate it. (Genesis 3:6)

Or what of Job, who says, "Does not the ear test words as the tongue tastes food?" (Job 12:11), and "I have not departed from the commands of his lips; I have treasured the words of his mouth more than my daily bread" (23:12)? Both Ezekiel and Jeremiah, perhaps following a tradition of prophetic practice, were literally commanded to *eat words* (although in a written form on a scroll): "Then he said to me, 'Son of man, eat this scroll I am giving you and fill your stomach with it.' So I ate it, and it tasted as sweet as honey in my mouth" (Ezekiel 3:3); "Your words were found and I ate them, And Your words became for me a joy and the delight of my heart; For I have been called by Your name, O LORD God of hosts." (Jeremiah 15:16). These types of references are not only in the Tanakh. Various New Testament sources record that Jesus refers to forms of immaterial nourishment that still affect the body and the material world:

> How is it you don't understand that I was not talking to you about bread? But be on your guard against the yeast of the Pharisees and Sadducees." Then they understood that he was not telling them to guard against the yeast used in bread, but against the teaching of the Pharisees and Sadducees. (Matthew 16:11)

[10] Anderson, 898.

> But he said to them, "I have food to eat that you know nothing about." Then his disciples said to each other, "Could someone have brought him food?" "My food," said Jesus, "is to do the will of him who sent me and to finish his work. (John 4:32-34)
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> [B]ut whoever drinks the water I give them will never thirst. Indeed, the water I give them will become in them a spring of water welling up to eternal life. (John 4:14)

Despite the suggested materiality of these verses, as well as others that contain phrases about alleviating thirst and hunger,[11] many are typically dismissed to the realm of abstract figurative language. They are interpreted as metaphors about our *spiritual desires* that can be fulfilled only by God, rather than aspects of our physical human bodies. Yet Jesus's use of Deuteronomy 8:3, as well as interpretive work by scholars and thinkers from the Christian tradition,[12] seem to turn us back towards physical embodiment. They make claims for a direct physiological relationship between "word" and nourishment more specific than a simple trust in God's providence alone. In fact, if these verses and ideas have any literal material merit, and, assuming utterances, or words, are tied explicitly to narrative acts, then we will soon see the possibility of a physiological connection is quite substantial.

The physiological connection between "word" and nourishment is made apparent when considering current interdisciplinary research in cognition and narratology, which argues that narratives are intimately related to knowledge acquisition (learning and memory). In her essay "Narrative as Nourishment,"[13] literary theorist Ellen Spolsky presents a case that words and narratives generate a distinct type of embodied and physical hunger called "representational hunger." By applying the work of neuroscience and cognitive science to narrative theory, Spolsky argues that this hunger, or cognitive appetite, is physiologically embedded within the roots of embodied cognition (the ability to learn and remember).

This cognitive appetite has direct ties to physical hunger and metabolism, which are also related to learning and memory. When applied to the process of interpreting texts, this information works as a hermeneutic of metabolic narratology, or the understanding that the human cognitive appetite (sparked by representational hunger) is responsible in part for our continued nourished existence because of its penchant for acquiring information through learning and memory via narratives.

## "The Word" and Cognition

In order to proceed with this hermeneutic of metabolic narratology, I must first establish the embodied roots of cognition. To do so, I turn to the discipline of neuroscience, which seeks to understand the physical foundations of the system of nerves and tissue in our brains involved

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[11] Paul uses food imagery in 1 Corinthians 3:2, etc.

[12] In his preface of the first English printed Bible (*The Great Bible)* in 1549, Thomas Cranmer wrote, "I would marvel much that any man should be so mad as to refuse in darkness light, in hunger food, in cold fire, for the word of God is light, food, and fire." Years later, John Milton would write that "books are as meats and viands" that help the "discreet and judicious reader" as they "confute, forewarn, and illustrate" (*Complete Prose Works,* 8 vols).

[13] Ellen Spolsky, "Narrative as Nourishment," in *Toward a Cognitive Theory of Narrative Acts*, eds. Frederick Luis Aldama (Austin, Texas: University of Texas Press, 2010), 37.

with information processing and behavior management. Coupled with research in the field of the philosophy of mind, recent neuroscientific studies suggest that our brains are not identical to, or a container for our, minds. A mind or "consciousness" is something that is more holistic and encompasses our entire physiological makeup.

Looking at how the various elements of the brain and body work together to create a sense of self reveals deep roots in our physicality. When we say things like "I am hungry," it is not that there are two things happening; there is not a mental self or homunculus as "I," and a separate physiological body signaling hunger through chemical reactions. Rather, a singular body is made up of varying factors that form an emergent whole, where the "I" or the self *is* the body signaling hunger through chemical reactions and becomes conscious of itself via a mental representation. This is not to say we are "nothing but" chemical reactions of the body, only that we cannot consider the human holistically without taking them into account.

By recognizing that fact, we can learn more about our "selves" as bodies and our interactions in and with the world. Some of these interactions, those expressly within the brain, function by using chemicals to transmit information and signals. Neuroscience focuses primarily on how the neurochemicals released in the brain during bodily processes affect the rest of the body. As hunger is a significant bodily state, and is neurobiologically founded,[14] the neurochemicals within our brains are good places to find evidence for an embodied relationship between the brain and the nourishing "word," with metabolism as the mediating factor.

Yale University's Sabrina Diano and her research team studied metabolism via the neurochemical ghrelin and concluded that ghrelin is "the gut hormone and neuropeptide" predominantly involved in the stimulation of appetite. Ghrelin "affects energy balance and growth hormone release through hypothalamic action that involves synaptic plasticity in the melanocortin system;" more simply, ghrelin is the chemical involved in stimulating metabolism, weight regulation, and brain growth.[15]

Although ghrelin's effects on metabolism and hunger regulation had been known for some time, Diano's study offers new insights: "The finding that GHS-R expression and ghrelin binding sites are present outside of the hypothalamus (in the cerebral cortex, for example) raises the possibility that peripheral administration of ghrelin or its analogs may also affect brain functions other than those related to endocrine and metabolic regulation."[16] As it has since been discovered, one of the "other functions" that ghrelin affects is "hippocampal synaptology,"[17] which refers to the brain's ability to perform short and long term memory acquisition. Paraphrasing Diano, this is evidence that ghrelin might serve as a molecular connection between our body's ability to learn and its ability to metabolize nutrients into energy.[18] What this means is

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[14]Akio Inui, Akihiro Asakawa, Cyril Y. Bowers, Giovanni Mantovani, Alessandro Laviano, Michael M. Meguid, and Mineko Fujimiya, *"*Ghrelin, Appetite, and Gastric Motility: The Emerging Role of the Stomach as an Endocrine Organ*," The FASEB Journal* 18, no. 3 (March 1, 2004): 439–456.

[15] Sabrina Diano, Susan A. Farr, Stephen C. Benoit, Ewan C. McNay, Ivaldo da Silva, Balazs Horvath, F. Spencer Gaskin, et al. "Ghrelin Controls Hippocampal Spine Synapse Density and Memory Performance," *Nature Neuroscience* 9, no. 3 (March 2006): 384.

[16] Ibid., 381.

[17] Ibid., 385.

[18] Ibid., 384.

that when a body is trying to regulate its energy level (metabolism), doing so not only enhances its appetite in the stomach, but may actually stimulate an appetite in the brain as well—a cognitive appetite[19] or a hunger to acquire knowledge.

The research also makes clear "that spatial learning and unfocused attention would be enhanced during fasting [which] is…in line with the necessity of an animal that is in negative energy balance to identify and locate energy sources to survive."[20] The body is then driven to acquire new information when hungry in order to adapt and survive better in its current environment and situation. It follows, then, that because humans have a more powerful information processing center in the brain than most other animals, one of our main survival strategies is locating and identifying sources for energy by learning and predicting where these sources may be to avoid times of fasting or starvation (a state of negative energy balance). The greater our access to relevant information, the greater the survivability.

Cognitive scientists quickly point out, however, that in order to gather this information most efficiently, the brain processes the body's collectively captured sensory input using symbolic reasoning, which is the ability to acquire, store, and process vast amounts of information by thinking in terms of signs and symbols. Jerome Feldman argues that although thinking "involves ideas, feelings, and reasoning" it is the signs and symbols of language, otherwise known as words, that "somehow links those ideas, feelings, and reasoning to perceived and spoken sounds (or signs in the case of signed languages)."[21]

This symbolic reasoning and language-thinking is achieved in the brain through physical units called neurons,"tiny biological entities that are alive and function by means of chemistry,"[22] which process information and communicate to each other by sending and receiving signals via chemical and electrical stimulation.[23] Our thoughts are made up of this kind of structured neural activity, or embodied chemistry, while language itself is inseparable from thought and experience.[24] All of this reinforces the idea that, minimally, knowledge acquisition with the use of words (signs and symbols; language) is an embodied process (neurons and chemicals), or, as Feldman succinctly puts it:

> Thought and language are not disembodied symbol systems that happen to be realized in the human brain through its computation properties. Instead, thought and language are inherently embodied. They reflect the structure of human bodies and have the inherent properties of neural systems as well as the external physical and social environment.[25]

Our brains use words, phrases, and images together with different aspects of cognition to organize and systematize the information received from our body's sensory perceptions. Helping

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[19] Ibid., 385.

[20] Ibid.

[21] Jerome A. Feldman, *From Molecule to Metaphor* (Cambridge, MA: The MIT Press, 2011), 5.

[22] Ibid., 13.

[23] E.g., the aforementioned neuropeptide grehlin.

[24] Feldman, 302.

[25] Ibid., 6.

us to survive, this cognitive process of language is an evolutionary advantage used for enhanced learning and memory.

Returning to ghrelin, if it triggers a physiological hunger for new information in the brain in the same way it does in the stomach for traditional forms of nourishment, we can conclude that our brains physically hunger after knowledge in the same way that our stomachs hunger after food—or, at the very least, use the same neurochemicals in the brain. In this way, bodies develop a cognitive appetite satisfied only by gaining new information and learning using language (symbolic reasoning).

Establishing that knowledge acquisition through language is connected to the body is only the first step in developing this new hermeneutic. Language on its own and independent of narrative are not capable of feeding our cognitive appetites. It is only when words are refined into *achieved narratives* that knowledge acquisition takes place. Without the embodied functionality of narratives, words and knowledge could not be processed, and thus we turn to the study of narratives.

## "The Word" and Narrative

Thinking narratively plays a key role in the way human beings frame and interpret the world around them. Cognitive psychologist Jerome Bruner says that "we organize our experience and our memory of human happenings mainly in the form of narrative— stories, excuses, myths, reasons, etc."[26] Narrative theorist David Herman argues that narrative itself "functions as a powerful and basic tool for thinking."[27] Ellen Spolsky states that "narratives exist in dynamic relationships with the minds and imaginations of their creators and audiences."[28] What all three are trying to get across is that when we receive, relay, and create narratives, we are shaping and being shaped by the very words and concepts with which we participate. To be clear, narratives do not have to be long, drawn-out tales of adventure and intrigue, or drama and comedy; they can be a simple structuring of related events in a causal fashion.

To perform the task of processing narrative, our minds, as an emergent properties of our brain-functions, use what Andrew Newberg and Eugene D'Aquili call "cognitive operators." These are collections of neurons within the brain working together on distinct computational tasks. There are eight of them, consisting of the (1) holistic, (2) reductionist, (3) abstractive, (4) quantitative, (5) causal, (6) binary, (7) existential, and (8) emotional value operators.

The (1) holistic operator allows the mind to process fragments into a whole using the parietal area of the right brain hemisphere. It helps narrative become a whole unit containing varying levels of interconnected words and symbols. The (2) reductionist operator, located generally in parts of the left hemisphere of the brain, works inversely to the holistic operator in that it allows the mind to process and parse individual words and symbols within a framework. The (3) abstractive operator, which operates in the parietal left hemisphere of the brain, allows

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[26] Jerome Bruner, "The Narrative Construction of Reality," *Critical Inquiry* 18, no. 1 (October 1, 1991): 6.

[27] David Herman, "Stories as Tools for Thinking," in *Narrative Theory and the Cognitive Sciences,* ed. David Hermann (Stanford: Center for the Study of Language and Information, 2003), 163.

[28] Spolsky, 38.

for the "linguistic naming of categories, and all other general concepts and ideas"[29] that make language feasible, and it finds connections between varying facts and plot points. From the (4) quantitative operator arises our basic math concepts and other functions like calculating time and distance. The (5) causal operator allows for the sequentialization of causes and effects, which, apart from words and symbols, are the building blocks for narratives. The (6) binary operator allows the mind to compare and contrast ideas, concepts, and facts—a process which creates space for imagination and prediction. The (7) existential operator probably resides in a section of the limbic system, helps to distinguish the real from the imaginary, and attempts to keep us from being tricked by false narratives (although this does not always work). Finally, the (8) emotional value operator assigns value (amount of worthwhile time and energy) to given facts and narratives, which helps motivate human beings for survival.

Like saliva, gastric juices, intestines, etc., each operator acts as a different element of our cognitive digestive tract. Sensations are gathered together, processed into symbols and signs, and then incorporated into the body for future use. This walkthrough of our intellectual architecture may imply that it could be applied simply to facts and information, but an important step needs to be included: the step that illustrates how *narratives* are involved with our cognitive digestion.

According to Spolsky, before new knowledge can be properly digested, it must develop into an "achieved narrative," which can be thought of as "a representation or schema that satisfies [hunger] because it enables prediction; when one can represent possible future states, one can decide how to act."[30] This predictive function is at the core of both narratives and conscious processing and allows for an individual to project interpretive models onto their experiences to determine how to act in a given situation. Feldman explains, "The brain is constantly active, computing inferences, predictions, and actions with each evolving situation."[31] It is this predictive function that provides enhancements to genetic viability, thus increasing evolutionary success. This connection to predictability reveals that narratives are devices for furthering our survival. Antonio Damasio speaks of this type of survival device:

> All living organisms from the humble amoeba to the human are born with devices designed to solve automatically, no proper reasoning required, the basic problems of life. Those problems are: finding sources of energy; incorporating and transforming energy; maintaining a chemical balance of the interior compatible with the life process; maintaining the organism's structure by repairing its wear and tear; and fending off external agents of disease and physical injury.[32]

The formation of narratives, like other "biological devices," does not necessarily require "proper reasoning" but instead needs to be successfully predictive.

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[29] Andrew Newberg, Eugene D'Aquili, and Vincent Rause, *Why God Won't Go Away: Brain Science and the Biology of Belief* (New York: Ballentine Books, 2001), 49.

[30] Spolsky, 40.

[31] Feldman, 3.

[32] Antonio Damasio, *Looking for Spinoza: Joy, Sorrow and the Feeling Brain* (Orlando: Houghton Mifflin Harcourt, 2003), 30.

To put this in the terms of metabolic narratology, a narrative's digestibility (its ability to become "achieved") relies on the ease with which it produces interpretive models in conjunction with the imaginative reusability of interpretive models that can be extracted. A digested narrative that can only be used once, or only for very precise situations, contains less adaptive power and therefore has less to offer than one that can be cognitively manipulated and applied to larger or more successful models of predictability. If Diano's research on ghrelin is correct and our brains hunger after narrative to aid survival, then narrative processing can be recognized as more than just an abstract tool for entertainment or distraction. It may even be considered a necessary piece of our physiological makeup.

Through this hermeneutic, narratives become epigenetic factors that influence, and are influenced by, our environment à la culture and learning. They feed into our cognitive systems, allowing us to maintain a metabolic understanding of our context. This is important because "understanding narrative as metabolism acknowledges the way in which a story and its readers participate in a mutually supportive and self-regulating homeostatic system."[33] In the same way our bodies maintain life via proteins, vitamins, and minerals, they need narrative in the mode of stories, thoughts, and imagination. Along with material nourishment, language and narrative establish a gateway into the physiological system of homeostasis, or body regulation.

## "The Word" and Embodiment

Walter B. Cannon first presented the concept of homeostasis in 1932 in "The Wisdom of the Body" to describe the continuous adjustments the body makes to maintain stability. According to Spolsky, "The importance of [homeostasis] for literary theory is as an understanding of regulation that doesn't depend on top-down, hierarchical management and control."[34] Simply put, homeostasis is something that the body does regardless of directed conscious thought or "proper reasoning." An individual cannot actively control his or her own homeostasis and can only influence it passively by the placating of natural desires, specifically hunger.

To alleviate the representational hunger that develops in our brains—and to achieve not just cognitive homeostasis, but a holistically embodied homeostasis—our bodies require the ingestion of narratives regardless of our inclination towards them. Just as we cannot control when our stomach hungers after material food, we cannot determine when our bodies hunger after cognitive food because the body consistently strives for a homeostasis that only these foods can provide. This means that narratives are not simply cultural evolutionary accidents or arbitrary tools for producing spirituality, but instead they are physiologically necessary for human survival.

With this line of thought, narrative metabolism succeeds in "undercutting those [people] that understand narratives, precisely fictional narratives, to be cognitively inert—'just for entertainment.'"[35] It also answers Newberg's question: "[W]hy would the human mind compel us, in every culture and throughout time, to seek answers to our most troubling problems in

[33] Spolsky, 39.
[34] Ibid., 57.
[35] Ibid., 42.

myth?"[36] Human bodies seek answers in "myth" (or narrative) because our minds are directly related to our brains, and our brains hunger for narrative in the same way the body hungers for bread. Indeed, as Newberg and D'Aquilli state, we need to recapture the original meaning of myth, which "comes from the Greek *mythos,* which translates as 'word,' but one spoken with deep, unquestioned authority."[37]

If true, then all narratives, religious and secular alike, can no longer be dismissed pejoratively as *mere myth* or story, narratives cease to speak of empirical reality in any definitive way once they are in the realm of myth. These myths, narratives, and words supply us with life. They exist in a mutualistic relationship with us. Human bodies consistently generate narratives,[38] and without narratives, human bodies become unstable due to a lack of homeostasis. Their likelihood of survival decreases significantly. It is at this point I would like to return to Jesus' claims in Matthew 4:4. It is not just that "our bodies are sustained by narratives," but that our bodies are best sustained by narratives of and from God.

## "The Word" and Scripture

With the physiological and narrative connections now established, I turn back to Scripture with this hermeneutic of metabolic narratology. With this hermeneutic as a lens, we can view Jesus' claim about being nourished by the "word" of God as a reference to the body's natural craving for learning and information (language and narrative). Which, for much of Christianity has been narrowed down to the learning and information of Scripture, despite the relatively late compilation of the Bible which did not exist until roughly 367 CE. This means that Jesus was probably not speaking about Scripture as we know it today and was most likely referring to the limited number of written scrolls and oral tradition that existed in his day. This fact highlights the surprising use of *rhēma* in Matthew 4:4. Rather than scripture alone, or *logos* alone, Jesus was arguing more broadly that the most satisfying narratives are those not only from God, but about Him as well.

As mentioned previously, in Matthew 4:4 Jesus is quoting Deuteronomy 8:3. According to the Tannaitic Midrash, Sifre Deuteronomy, "Thus Scripture states: 'For not by bread alone does man live'—this refers to midrash – 'but rather [also] that which issues forth from God's mouth' refers to the laws and the haggadot."[39] This has lead Rabbi Eliezer Diamond, Professor of Talmud and Rabbinics at Jewish Theological Seminary, to argue that "the midrash retrojects the spiritual nature of the concluding phrase in the verse onto the previous one. The verse becomes a reminder that one must study all genres of Torah."[40] So the *môṣā,* at least according to the rabbis, inherently connotes its relationship to the teachings of the Torah through their tradition, but not *just* the Torah, as *môṣā* also applies this level of importance to midrash, haggadot, and anything

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[36] Newberg, D'Aquili, and Rause, 57. Newberg and D'Aquili attempt to answer this question with their concept of the "Cognitive Imperative" which is quite similar to Spolsky's approach with narrative, but focuses primarily on the mind's tendency towards thinking.

[37] Ibid., 56.

[38] This is dependent upon the fact that narratives require beings capable of symbolic reasoning.

[39] Reuven Hammer, *Sifre: A Tannaitic Commentary on the Book of Deuteronomy* (New Haven: Yale University Press, 1987), para. 48.

[40] Loewen, "Deutoronomy 8:3," n. Message to Eliezer Diamond. Aug 9th 2013. E-mail.

that falls under the rubric of Torah both written and oral. For the rabbis, nourishment is not only found in the written words, but in all the official writings and oral traditions that might have something to say about God or from God.

In light of this rabbinic understanding, it is not a stretch to think that, when Jesus speaks of "God's word," he might also be suggesting works within and outside of the bounds of Torah and, more broadly speaking, any information from and about God.[41] For Christian interpreters, this perspective could encompass the Gospels, Epistles, Acts, the Apocalypse of John, the apocryphal writings, etc.

To this end, in Matthew 4:4, it appears that Jesus is drawing attention to the embodied hunger for all the narratives (knowledge) of and from God, which sustain life. Coincidentally, Ellen Spolsky, referring to narratives in general and keeping in mind the fact that our bodies desire homeostasis, argues that "to be hungry for knowledge is not 'just' metaphorical but is properly analogical: in the course of human evolution, organisms analogize to their own profit."[42] It is therefore conceivable to see how Jesus is arguing that to be hungry for the knowledge of God might potentially be the pinnacle of human profit, reinforcing the words of natural theologian Lord Adam Gifford who claimed that knowledge of God "is the means of man's highest well-being."[43]

With this hermeneutic of metabolic narratology, a plethora of scriptural verses and stories are freed from the exclusive claims of abstract spiritual enhancement or arbitrary divine command. And there are not just scriptural possibilities, but theological ones as well. Metabolic narratology may affect our understanding of the Eucharist and further elaborate on its importance for homiletics. This hermeneutic of metabolic narratology reveals the power and complexity of the ways in which the word of God satisfies our physiological need for nourishment.

As a quick illustration, let us consider Jesus' claims in John 6:41-59. This passage's connection to the theological concept of Jesus as "Word" offers some interesting perspectives on the "edible" aspect of eating the "word." The Greek verb *trōgō* in verse 51, used for "eat" or more literally "munch," makes the materiality of the action indisputable, understandably leaving many of Jesus' listeners unsettled by his claim. The key verse for understanding this passage using metabolic narratology is 45, in which Jesus quotes Isaiah 54:13: "It is written in the Prophets: 'They will all be taught by God.' Everyone who has heard the Father and learned from him comes to me." Here Jesus associates himself with the bread of life that comes down from heaven and then draws connections between this bread and the process of learning and being taught by God, like the tradition described earlier by Claassens.

This passage of Scripture insinuates an association between the bread of life and information transferral, with Jesus as both the utterer of this information and, in his very nature, as the utterance (*môṣā*). He *is* the information. He *is* the "word."[44] By listening to Jesus and digesting his narratives, a person is also digesting Jesus himself who *is* the narrative, whose very life *is* the information. According to a hermeneutic of metabolic narratology, a person who "eats"

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[41] This assumes that Jesus probably would have been very familiar with the oral teaching of his day.

[42] Spolsky, "Narrative as Nourishment," Kindle edition: location 769-771.

[43] Lord Adam Gifford, "TRUST DISPOSITION and SETTLEMENT of the Late Adam Gifford, Sometime One of the Senators of the College of Justice, Scotland," August 21, 1885. http://www.giffordlectures.org/will.asp.

[44] John 1:1.

(listens to, digests, forms an achieved narrative of) the bread of life (Jesus) is physically incorporating this information into their bodies for their material wellbeing via their cognitive metabolism in search of homeostasis. By fusing the literal interpretation of "bread of life" with information from and about God, Jesus' claim makes it imaginable for a person to physiologically, via cognitive metabolism, eat the "bread of life" which is his "body" and allow it to nourish his or her own body.

## Conclusion

The goal of religious scholars and theologians who follow Jesus ought to involve facilitating this nourishment. The hermeneutic of metabolic narratology is another pedagogical tool to help in the endeavor to ensure that the "words" within Scripture remain digestible—not in the sense that they simply agree with a particular culture or context but, instead, are constantly producing interpretive models and retain an imaginative reusability so that they can more efficiently develop into achieved narratives.

In his book *Eat This Book*, Eugene Peterson puts this another way: we must make space for a narrative "that [enters] our souls as food enters our stomachs, spreads through our blood, and becomes holiness and love and wisdom."[45] While Peterson seems to limit narratives to the soul, I hope I have shown that, in actuality, narratives are literally and physically infused in the brain via our cognitive metabolism and then are embodied in a new proclivity towards holiness, love, and wisdom. This cognitive mastication of Scripture satisfies our innate survival mechanisms to consume and digest narrative by reading and digesting the "word"—whether Jesus was speaking only about Scripture itself, himself, narratives about God in general, or even to something we might never fully grasp. Whatever the reality, the interdisciplinary conversations between science and the Bible have reinforced the idea that the reading of Scripture is for our benefit as embodied human persons.

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[45] Eugene H. Peterson, *Eat This Book: A Conversation in the Art of Spiritual Reading* (Grand Rapids: Wm. B. Eerdmans Publishing, 2006), 103-4.