



## THE VALUE OF PI IN THE BIBLE (AND WHAT IT TELLS US ABOUT BIBLICAL HERMENEUTICS)

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## 1. The Value of $\pi$ in the Bible

In ancient times, builders and land surveyors were aware that the ratio of a circle's circumference to its diameter was a constant, and they were also aware that the number three was a rough approximation of that constant. Today, we know that  $\pi$  is approximately 3.14159265359, but the decimal system for notating non-integer numbers did not spread westward from India until the 12th century of the Common Era. In ancient times, therefore, the value of  $\pi$  was not usually reduced to a single multi-digit number. Instead, it was expressed as a ratio. The ratios most often used were 3:1, 22:7, 256:81, 333:106, and 355:113. The last of these is the most accurate, corresponding to 3.14159292035 in decimal notation. But 333:106 is also very accurate, corresponding to 3.14150943396 in decimal notation. And less accurate approximations were also widely used. The Rhind Mathematical Papyrus, which dates to 1650 B.C.E., discusses how to determine the volume of a cylindrical granary if one knows its diameter, and the formula given in that text indicates that the ancient Egyptians used 256:81 as an approximation for  $\pi$ , corresponding to 3.16049382716 in decimal notation.

One excerpt, however, from the Bible suggests that, in ancient times, Israelite builders and land surveyors were working with much cruder approximations. Referring to the construction of the basin used for priestly ablutions in the temple of Solomon, the first book of Kings states: "And he made the molten sea of ten cubits from brim to brim, round in compass, . . . and a line of thirty cubits did compass it round about." (1 Kings 7:23.) If one calculates the ratio between the thirty-cubit circumference of the "molten sea" and its ten-cubit diameter, it appears that the Bible's redactors used the ratio 3:1 as a rough approximation for  $\pi$ .

But what if the scribes who redacted 1 Kings knew that the value for  $\pi$  indicated in the text was merely an approximation? If so, how might they have signaled that awareness? Perhaps by using *gematria*, a hermeneutical technique whereby the numerical value of a letter is calculated based on its position in the Hebrew alphabet.

Significantly, in the text translated above from 1 Kings, the word "line" is used for "circumference" ("a line of thirty cubits did compass it round about"). In Hebrew, the word for "line" is qava, and it is usually spelled using the Hebrew letters *quf* and vov (many Hebrew words are spelled without vowels). But in 1 Kings, the word "line" is spelled incorrectly as *qavah*, using the Hebrew letters *quf*, *vov*, and *hei*. If each letter is given a numerical value based on its position in the Hebrew alphabet, then the value of *qava* (the correct spelling) is 100 + 6, or 106, but the value of *qavah* (the incorrect spelling) is 100 + 6 + 5, or 111. Thus, the text misspells *qava*, and the misspelling results in an error in the numerical value of that word, changing its value from 106 to 111.

Taking this bit of gematria into consideration, it appears that the scribes who redacted 1 Kings chose a very efficient way to express the value of  $\pi$  in the biblical text. Decimal notation was not in use at the time, and therefore if they had wanted to write that the "molten sea" was ten cubits across and 31.415 cubits around (which, of course, would have much more accurately approximated  $\pi$ ), they would have needed to express 31.415 as the ratio 333:106 multiplied by 10, which would have required a great deal of additional text. Instead, the scribes very cleverly wrote the erroneous value of "thirty cubits" for the circumference of the "molten sea" and then signaled that they were well aware of the error by inflating the numerical value of the word *qava* ("line"), which is the word that the text uses for "circumference." By giving that word an inflated value of 111, instead of 106, these clever scribes hinted that the erroneous circumference of "thirty cubits" also needed to be inflated, in the same proportion. And when that is done  $(30 \times 111/106)$ , the circumference of the "molten sea" becomes 31.4150943396 cubits, indicating a very accurate knowledge of the value of  $\pi$ . Indeed, it is as if the scribes had said: "Just as we have increased the numerical value of this word that we are using here to describe the circumference of the molten sea, so also, and to the same degree, the circumference of thirty cubits should be increased."

The biblical text thus demonstrates that the ancient scribes were aware of a very accurate approximation of  $\pi$ , and they encoded it into the Bible in a very efficient way. The text makes use of gematria (calculating the numerical value of letters) to convey its full meaning, and the application of that hermeneutical technique is, in this instance, too illuminating to be casually dismissed. Rather, it suggests that the numerical value of letters and words was something the Bible's redactors had in mind as they labored over the sacred text. And that fact, in turn, suggests that modern Bible scholars, if they want to be objective in their search for truth about the Bible's meaning, should not lightly dismiss the hermeneutical methods recorded in Jewish esoteric literature.

Woe to the person who says that Torah intended to present a mere story and ordinary words! For if so, we could compose a Torah right now with ordinary words, and more laudable than all of them [in the existing Torah]! . . . Concerning Torah, one should look only at what is beneath the garment. So all these words and all these stories are garments.

(Zohar, 3:152a.)

The foregoing quote is drawn from the *Zohar*, the primary text of the Jewish mystical tradition. Taking seriously the *Zohar*'s directive to treat the "words" and "stories"

of Hebrew scripture as "garments" and to look "at what is beneath the garment," the remainder of this short article explicates the text of the Hebrew Bible. The next section, entitled "Two Kingdoms; Two Names of God; One People," focuses on the *words* of scripture, showing that those words reveal a polytheistic subtext that many Bible readers overlook. The final section, entitled "The Nondual Garden of Eden," focuses on the *stories* of scripture, showing that the leading message of one of those stories, the Garden of Eden story from the book of Genesis, is not what most readers imagine.

## 2. Two Kingdoms; Two Names of God; One People

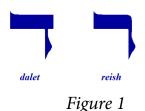
Hebrew scripture sometimes uses the Canaanite name El Shaddai for God, particularly to indicate God's righteous or punitive aspect. (See Isa 13:6, Joel 1:15, Job (passim), Ruth 1:20-21.) We know now, from study of the Ugaritic tablets discovered in Syria in 1928, that the name El refers to the chief god of the Canaanite pantheon, and from the Deir 'Alla Inscription discovered in Jordan in 1967, we learn that the name Shaddai probably refers to the Canaanite storm god Ba'al. Thus, the combined name El Shaddai implies "El (God) appearing in the form of *Shaddai*," but in English translations of the Bible, the name El Shaddai is usually rendered simply as "God Almighty."

Hebrew scripture also uses the name YHVH for God, sometimes suggesting that it invokes God's mercy. (See Exod 34:5–7; Num 14:18–20; Deut 5:9–10.) The name YHVH is not vocalized in Hebrew, and in English translations of the Bible it is usually rendered as "LORD" or "Yahweh." Significantly, however, scripture informs us that the patriarchs of the Israelite people worshiped God as *El Shaddai*, and that

Moses, who was reared in the Egyptian religion, was the one who first introduced the name YHVH to the Israelites. Recall, for example, these revealing words that God spoke to Moses: "I appeared to Abraham, to Isaac, and to Jacob as *El Shaddai*, and with my name YHVH, *I was not known to them*." (Exod 6:2–3, italics added.)

Hebrew scripture also relates the history of two rival kingdoms: the Northern Kingdom, called "Israel" (Yisrael), and the Southern Kingdom, called "Judah" (Yehudah). These kingdoms were united under David (ca. 10<sup>th</sup>–11<sup>th</sup> centuries B.C.E.), but after the death of David's son Solomon, Israel rebelled against Judah, and a bitter civil war raged between these two kingdoms for centuries. (See 1 Kings 11:26–39, 12:1-24; see also Ezek 37:15-28.) Moreover, this division of the Davidic kingdom into two warring parts was not at its root a political division; rather, it was a religious and ideological division. If we look "beneath the garment" of the name El Shaddai — the name the patriarchs used for God we find that, in Hebrew, it is an anagram of "Israel," the name of the Northern Kingdom. By contrast, the name YHVH — the name of God that Moses introduced — is embedded in the Hebrew spelling of "Judah," the name of the Southern Kingdom.

To see that *El Shaddai* is an anagram of the name "Israel," we must appreciate that the Hebrew letter *dalet* (corresponding to a "D" in English) is almost identical in form to the Hebrew letter *reish* (corresponding to an "R" in English). (See Figure 1.)



Because of this similarity of form, the Zohar asserts that a dalet is the same as a reish, and in fact the letters dalet and reish — whose names both mean "poor" are somewhat interchangeable in Hebrew scripture. (See Num 1:14 [Deuel] and 2:14 [Reuel]; Gen 10:4 [Dodanim] and 1 Chron 1:7 [Rodanim].) When we recognize that the Hebrew spelling of the name El Shaddai is alef-lamed-shin-dalet-yud (A-L-S-D-Y) and that the Hebrew spelling of the name "Israel" is yud-shin-reish-aleflamed (Y-S-R-A-L), and when we further recognize the interchangeability of the letters dalet and reish, it becomes clear that, in Hebrew, the name "Israel" (Yisrael) expressly invokes the patriarchal God El Shaddai. (See Figure 2.)<sup>1</sup>



Figure 2

Likewise, when we recognize that the Hebrew spelling of the name "Judah" is yud-hei-vov-dalet-hei (YHVDH), contai-

ning all the letters of the name YHVH, it becomes clear that, in Hebrew, the name "Judah" (*Yehudah*) expressly invokes the Mosaic God YHVH. (See Figure 3.)



Figure 3

In the Northern Kingdom, the temple was located in Beth-El (lit.: "House of El"), and it was dedicated El Shaddai (see Gen 35:1–15). In that kingdom, personal names often included the theophoric element "-el" or "-ba'al," and the very name of the kingdom — Yisrael ("Israel") — invokes the deity of the patriarchal religion: El Shaddai. In the Southern Kingdom, the temple was located in Jerusalem (the "City of David"), and it was dedicated to үнүн (see 2 Sam 6:1–19). In that kingdom, personal names often included the theophoric element "-yahu" (Y-H-V), and the very name of the kingdom — Yehudah ("Judah") — invokes the deity of Moses' Egyptian upbringing: YHVH. Thus, "beneath the garment" of scripture's words, we discover two religions, not one; there, we discover the Canaanite religion of the patriarchs and also the Egyptian religion that Moses introduced to their descendants.

<sup>1</sup> The identity between *El Shaddai* and the name "Israel" is stated explicitly in the Bible, although the relevant verses are dispersed in two different sections of the book of Genesis. See Cumming, James H., *Torah and Nondualism: Diversity, Conflict, and Synthesis* (Ibis Press 2019), pp. 152–153.

Two kingdoms. Two names of God. Two temples. Two religions. But to heal that often-bitter division, a wise group of scribes wove together the narratives of the two nations into a single Torah. "Behold, how good and how pleasant the abidance of brothers — even together!" (Ps 133:1.)

## 3. The Nondual Garden of Eden

The preceding section demonstrates that the *words* of scripture are not always what they seem to be. They are "garments" concealing hidden meanings, and the Bible thus includes a polytheistic subtext that many of its readers overlook. The present section shows that the *stories* of scripture, when read closely, are also "garments" concealing hidden meanings.

Western ideas about free will and determinism flow, in part, from the Christian dogma of original sin, which asserts that, by the exercise of free will, mankind introduced evil into the perfect world that God had created. In this way, the Garden of Eden story from the book of Genesis is interpreted as a wisdom tale urging us to exercise our God-given freedom to choose good and to reject evil. The reader may be surprised, however, to learn that human free will is not the leading message of the Genesis story; rather, nondualism is that message.

Here, for ease of reference, I have included my own translation of the Garden of Eden story (Gen 2:8–3:23). For the original Hebrew, I relied on the Masoretic text of the Bible, and to help the reader think critically about the story, I favored a literal translation over one that conforms closely to English idiom. Readers who are familiar with the details of the story can skip to my commentary, which follows immediately after this translation:

And YHVH-God planted a garden in Eden, from the East, and he placed there the Adam that he [had] formed. And YHVH-God caused to sprout from the soil every tree pleasant for appearance and good for food, and the Tree of Life in the midst of the garden, and the Tree of the Knowledge of Good and Evil. . . . And үнvн-God commanded concerning the Adam, saying, "From every tree of the garden you will surely eat [(lit.: eating you eat], but from the Tree of the Knowledge of Good and Evil you will not eat from it, for in the day of your eating from it, you will surely become mortal [(lit.: dying you die)]." . . . And YHVH-God built up the rib that he took out of the Adam into a woman and brought her to the Adam. . . . And the two of them were naked — the Adam and his woman — and they were not ashamed. And the Serpent was more cunning than all the living beings of the field that YHVH-God had made. And he said to the woman: "Really!? — that God said, 'You will not eat from every tree of the garden'?" And the woman said to the Serpent, "From the tree-fruit of the garden we will eat, but from the fruit of the tree that is in the midst of the garden, God said, 'You will not eat from it, and you will not touch it, lest you die." And the Serpent said to the woman, "You will surely not die [(lit.: not 'dying you die')]! For God knows that in the day of your eating from it, . . . your eyes will open, and you will be like gods, knowers of good and evil." And the woman saw that the tree was good for food and that it was beneficial for the eyes, and the tree was desirable to make [one] wise, and she took from its fruit, and she ate, and she gave also to her man with her, and he ate, and the eyes of the two of them were ope-

ned, and they knew that they were naked, and they stitched leaves of fig, and they fashioned for themselves wraps. And they heard the sound of YHVH-God walking in the garden, at the breeze of the day, and the Adam and his woman hid themselves from the face of YHVH-God in the midst of the tree[s] of the garden. And үнүн-God summoned the Adam, and he said to him, "Where are you?" And [Adam] said, "Your sound I heard in the garden, and I feared, for I am naked, and I hid myself." And [YHVH-God] said, "Who told to you that you were naked? Perhaps from the tree that I commanded you not to eat from it you ate?" . . . And YHVH-God said, "Behold, the Adam [is] like one from us for knowing good and evil. And now, lest he send forth his hand and take also from the Tree of Life and eat and live forever." And YHVH-God sent him from the garden of Eden . . . .

As said, this story of Adam and Eve's rebellion against the commandment of "YHVH-God" is usually understood as scriptural proof that human beings have free will. It is pointed out that God (YHVH) could have created Adam and Eve as programmed automatons, incapable of disobeying God's instructions. But, instead, God created them with free will, and we know that is true because Adam and Eve used their freedom to disobey God's command. A comparison is then sometimes drawn to the healthy psychological development of a youth entering adulthood: To establish an individual identity, the youth must disobey his or her parents, after which a reconciliation is hopefully made, and the child, now an adult, engages his or her parents as a peer. According to this theory, the message of the Garden of Eden story is that human freedom is a "greater good" that outweighs the evil of Adam and Eve's rebellion against God, an evil that can be healed through religious faith and practice.

But is that really the message? I don't think so, for where did the story deny the existence of deterministic laws of physics governing all that occurs in God's world, including in each neuron of Adam and Eve's two brains? And where did the story say that, although God created the world, Adam and Eve created their own thoughts, desires, and choices, thus making them co-creators (i.e., gods) alongside God? And where did the story deny God's role as the ultimate author of Adam and Eve's disobedience? Where, in short, did the story say that Adam and Eve had absolute free will?<sup>2</sup>

The first thing to notice about the Garden of Eden story is that as soon as Adam and Eve disobeyed God's commandment, apparently exercising their free will, they also developed knowledge of "good and evil." Thus, free will and moral dualism are presented as two sides of the same philosophical coin, and what the story really comes to teach us is that our (false) sense of freedom goes hand in hand with our (mistaken) habit of knowing "good and evil." Adam and Eve imagined that they were independent masters of their own destiny, and as soon as they imagined

<sup>2</sup> Absolute free will is the freedom to choose any course of action at any moment. Relative free will is the freedom to express one's inner essential nature unimpeded by external influences. On the distinction between absolute free will and relative free will, see Cumming, James H., "Freedom in a Deterministic Universe," in DOGMA, Revue de Philosophie et de Sciences Humaines, Édition No. 21 (Autumne 2022), pp. 135–137.

themselves in that way, they began dividing God's creation into that which they deemed to be "good" and that which they deemed to be "evil."

By this reckoning, faultfinding is the underlying sin that Adam and Eve committed. Adam and Eve partook from the "tree" — the mental habit — of knowing good and evil, and that mental habit made them feel alienated from God. In God's world, nothing is evil in the absolute sense of the term. Of course, some things are evil in the relative sense, meaning that some things are detrimental to human health and happiness, and one should certainly strive to avoid such things, but whatever the outcome of one's efforts, it is not evil in the *absolute* sense. Nothing that transpires in God's world is ever a mistake; nothing ever merits deletion. When, however, one begins to imagine that human beings have absolute free will, one also begins to reject certain aspects of the world, imagining that they did not need to be.

But if the foregoing explication of the Garden of Eden story is correct — that is, if dualistic thinking was Adam and Eve's only sin — then why does God (YHVH) say in response to Adam and Eve's eating from the Tree of Knowledge: "Behold, the Adam [is] *like one from us* for knowing good and evil"? Doesn't that statement imply that *all* the members of the Divine Council, including even YHVH, are knowers of good and evil (i.e., dualists), just like the post-rebellion Adam and Eve?

The confusion here arises because we tend to impose the idiom of the English language onto the Hebrew text. When the Hebrew text tells us that Adam, by knowing evil, has become "like *one* from us," it quite literally means that there is *one* member of the Divine Council that is a knower of

good and evil (i.e., a dualist). And which "one" might that be? Presumably, it is the Serpent (i.e., Satan), because he is the one who claims that knowing good and evil will make Adam and Eve "like gods." (Gen 3:5.)<sup>3</sup> In other words, Adam and Eve partook from the "tree" of dualistic knowledge, and they became dualists, like the Serpent (i.e., Satan).

We see, then, that a close reading of the Garden of Eden story tells us that Adam and Eve never really had free will, at least not in the absolute sense (i.e., the freedom to choose any course of action at any moment). They only *imagined* that they had it, and then they imagined that they had used their free will to rebel against God, and having so imagined, they justified themselves by persuading themselves that God sometimes gets it wrong — in other words, by fault finding. Thus, they took upon themselves the task of judging God's perfect creation.

And for a person who proudly claims that he or she has absolute free will, acts of heroic self-control are the certain proof of that claim, and irresistible bodily urges are feared and despised, because they undermine one's imagined sense of absolute freedom. Therefore, when Adam and Eve took upon themselves the task of choosing things that they deemed to be evil in God's world, the first things they chose were the irresistible bodily urges that God had given them. And since nakedness reveals those urges for all the world to see, Adam and Eve made wraps and covered themselves.

Then, from that small start, Adam and Eve imagined many other things in God's world to be evil, and whenever they found

<sup>3</sup> On Satan's membership in the Divine Council, see Job 1:6.

themselves unable to resist such things, they justified their actions with contrived excuses, or they covered their actions with the "fig leaves" of locked doors and deleted computer files, or they bemoaned their sinfulness, as Paul did in his famous letter to the Romans. (See Rom 7:15-24.) And although Adam and Eve could not — even after the most careful examination pinpoint when or how they had actually chosen to have the thoughts and desires that led to their rebellion against God, they never doubted their absolute freedom to choose, for doing so would have stripped them of the false sense of agency they gained when they first accepted the lie of Cartesian dualism. God therefore asked Adam, "Where are you?" By imagining that he had absolute free will, Adam had developed a first-person perspective. In other words, Adam had become a map of the universe with a "You are here" arrow at its center; he had gained a (false) sense of location within the Garden of Eden rather than enjoying his inherent identity with the entire Garden.

For Adam and Eve, it was the pretense of absolute freedom that constituted their true rebellion. And it was that same pretense of absolute freedom that caused them to superimpose an invented goodevil dualism upon the perfect world that God had created. Among the seven days of Creation, the only day that God does not call "good" is the second day, the day when God created a "divider" (*mavdil*) — dualism, that is. (See Gen 1:6–8.) Adam and Eve elevated the relative good of dualism over the absolute good of embracing God's marvelous show, and so it went for them . . .

... until one day Adam and Eve awoke from their dream and realized that they had never rebelled against God even for a moment. In fact, they had no power to do so, and the absolute freedom that they imagined themselves to possess was only a proud lie that had served to separate them from God.

It was God that created the thought that motivated Adam and Eve to follow the Serpent's advice. God created that thought just as surely as God breathed the "breath of life" into Adam's brow (Gen 2:7), just as surely as God created Pharaoh's thoughts when Pharaoh decided to harass the Israelites (see Exod 4:21, 7:3, 9:12, 10:1, 10:20, 10:27, 11:9-10, 14:4, 14:8), and just as surely as God created Cyrus's thoughts when Cyrus proclaimed the rebuilding of the temple in Jerusalem (see 2 Chron 36:22; Ezra 1:1, 7:25). Indeed, the Bible teaches repeatedly that God is the author of human thoughts. (See Lev 26:36; Deut 2:30; Josh 11:20; Judg 9:23; 1 Sam 16:14-23; 1 Kings 22:19–23; Isa 10:5–6, 36:10, 45:7; Jer 25:9, 27:6.) The only "sin" that Adam and Eve ever committed was the false belief that they had the freedom to sin (i.e., to defy God's will). And when they relinquished that false belief and accepted that everything is just God's marvelous show (see Isa 45:7), they quit their constant fault finding. They stopped, that is, being knowers of "good and evil."

But — you might object — if everything is God's marvelous show, then no moral standards govern human conduct. The mistake in that reasoning is the tendency to confuse determinism with fatalism, falsely concluding that human effort and righteousness have no place in a deterministic universe. Why can't effort and righteousness play a part in the destiny that God has laid out for human beings? God's universe is perfect, but God has assigned a role for us to play in that universe, and it is not a passive role. By exerting our-

selves in positive ways, we foster happiness for ourselves and for others, and God—the author of all things—placed it in our hearts to do so, as the Bible repeatedly tells us. (See 1 Kings 10:24; Jer 31:33, 32:40; Ezek 11:19–20, 36:26–27; Ps 4:7; Prov 21:1; Ezra 1:5; Neh 2:12, 7:5.)

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