

Mitteilungen

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Šeqel ha-qodeš of 20 gerahs, and the Absolute Dating of Selected Pentateuchal Texts: A Numismatic Approach

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1 Introduction

Scholars have long pointed out the difficult-to-explain inconsistency between the system of the so-called »Holy Sheqel« שֶקֶל הַקֹּדֶשׁ (*šql hqdš*: sheqel of the sanctuary) described in the Pentateuch and the actual weight system used in the Kingdom of Judah and the monetary system attested from the Persian period province of Yehud.¹ The two systems seem to be disconnected, and this inconsistency requires explanation. Some of the studies to date have tended to conclude that the regulations on the Holy Sheqel in the Pentateuch were never applied in practice.² Christian Frevel recently presented another way of explaining this topic.³ He comprehensively discusses previous research on this issue, arguing that the conversion system based on the Holy Sheqel, consisting of 20 *gerahs*, was created in the Persian era due to the need to create a convenient system for converting currency values

1 Haim Gitler, Catharine Lorber and Jean-Philippe Fontanille, *The Yehud Coinage: A Study and Die Classification of the Provincial Silver Coinage of Judah, Numismatic Studies and Researches XII* (The Israel Numismatic Society, Jerusalem 2023) 42–44.

2 Raz Kletter, *Economic keystones: The Weight System of the Kingdom of Judah*, JSOT Suppl. 276 (Sheffield: Sheffield Academic Press 1998), 101–107.

3 Christian Frevel, »The Function of the Biblical »Holy Sheqel«: An Essay on Parallel Standards and their Conversion after the Introduction of Coinage,« *Israel Numismatic Research* 18 (2023) 29–54.

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from different monetary systems.⁴ We consider neither the first nor the second of these explanations to be satisfactory. Below, we will attempt to propose a different approach to the origins of the unit of measurement found in the Bible, known as the Holy Sheqel made up of 20 *gerahs*.

2 Presentation of the problem

Research on the system of weights and measures from the time of the Kingdom of Judah indicates that the basis of the local system of measures during the late Persian period was the sheqel, consisting of 24 *gerahs*.⁵ Numismatic data clearly confirm the continuity of this system in the Persian period.⁶ However, references in the Pentateuch refer to a Holy Sheqel consisting of 20 *gerahs*:

This is what each one who is registered shall give: half a shekel according to the shekel of the sanctuary (the shekel is twenty *gerahs*), half a shekel as an offering to the LORD. (Exod 30:13)⁷

All assessments shall be by the sanctuary shekel: twenty *gerahs* shall make a shekel. (Lev 27:25)

you shall take five shekels apiece, reckoning by the shekel of the sanctuary, a shekel of twenty *gerahs* (Num 3:47)

Their redemption price, reckoned from one month of age, you shall fix at five shekels of silver, according to the shekel of the sanctuary (that is, twenty *gerahs*). (Num 18:16)

Further references to the Holy Sheqel (*šql hqdš*) in the Pentateuch (Exod 30:24; 38:24–26; Lev 5:15; 27:3; Num 3:50; 7:13–86) do not mention the division into 20 *gerahs*, hence they will not be analysed here.

The system of the Holy Sheqel consisting of 20 *gerahs* is inextricably linked to references to the calculation of the increase in the temple's dues by one-fifth (חמישית):⁸

And you shall make restitution for the holy thing in which you were remiss and shall add one-fifth to it and give it to the priest. The priest shall make atonement on your behalf with the ram of the guilt offering, and you shall be forgiven. (Lev 5:16)

⁴ Ibid.: 46–49.

⁵ Raz Kletter, »Scale/s, Measure/s, and Weight/s«, in *Encyclopedia of Material Culture in the Biblical World: A New Biblisches Reallexikon*, ed. Angelika Berlejung (Tübingen: Mohr Siebeck, 2022) 806–819, esp. 811. See also Gitler, Lorber, Fontanille, *The Yehud Coinage*, 54–55, Table III.1.

⁶ Gitler, Lorber, Fontanille, *The Yehud Coinage*, 41–47.

⁷ Quotations from NRSV.

⁸ It is worth noting here also that the accounts of Joseph in Egypt use a decimal-based measure and refer to one-fifth as a unit of conversion (Gen 41:34; 47:24).

Or anything else about which you have sworn falsely, you shall repay the principal amount and add one-fifth to it. You shall pay it to its owner when you recognize your guilt. (Lev 6:5) But if it is to be redeemed, one-fifth must be added to the assessment. »If a person consecrates a house to the LORD, the priest shall assess it: whether good or bad, as the priest assesses it, so it shall stand. And if the one who consecrates the house wishes to redeem it, one-fifth shall be added to its assessed value, and it shall revert to the original owner. (Lev 27:13–15)

And if the one who consecrates the field wishes to redeem it, then one-fifth shall be added to its assessed value, and it shall revert to the original owner; (Lev 27:19)

If it is an unclean animal, it shall be ransomed at its assessment, with one-fifth added; if it is not redeemed, it shall be sold at its assessment. (Lev 27:27)

If persons wish to redeem any of their tithes, they must add one-fifth to them. (Lev 27:31)

and shall confess the sin that has been committed. The person shall make full restitution for the wrong, adding one-fifth to it and giving it to the one who was wronged. (Num 5:7)

It is here that the inconsistency between the sheqel system consisting of 24 *gerahs* and the Holy Sheqel system described in the Bible, as well as the one-fifth fees, is most evident. In the monetary system that was used in the province of Yehud during the late Persian period, where one sheqel consisted of 24 *gerahs*, or 48 coins with a value of half a *gerah*, it is impossible to obtain a round number of coins to calculate 20 %.

The reference to payment of one-fifth in silver – חמישית כסף (then one-fifth shall be added to its assessed value, Lev 27:19) may indicate that these regulations were already in place at a time when a monetary system was in use in the province of Yehud. Christian Frevel argues that all references to the holy sheqel come from the late editorial layers of the Pentateuch:

The expression *šeqel haqqōdeš* occurs 25 times in the Torah; to be more precise, in the so-called late priestly literature in Exodus-Leviticus-Numbers [...] In this paper, as in current Pentateuchal research, the adjective ›late‹ refers to the relative period of origin of the Pentateuchal strata and the progressive growth of the priestly tradition, starting from narrative traditions (P⁸, in the exilic or early post-exilic times) and developing through multilevel additions (P⁹, in post-exilic contexts) to late priestly ›Fortschreibungen‹ (that are successive textual additions) that already presume the integration of the Holiness Code in Lev 17–26. In absolute dating, ›late‹ means a period from the middle of the fifth century BCE. To put it simply, the interest in the ›holy sheqel‹ and the introduction of coinage in the late Persian period are not far apart.⁹

9 Frevel, »The Function«: 32.

3 Hypothesis and Dating

Numismatic research suggests a solution to this inconsistency. According to Haim Gitler and Catharine Lorber, the monetary system underwent a change sometime in the early Macedonian rule. The primary silver denominations, which averaged 0.24 grammes and corresponded to the half-*gerah* on the Judahite or Persic standard (Fig. 1), were eventually superseded by issues averaging 0.19 g.



Fig. 1: Yehud Type 16, half *gerah*, 350–333 BCE. Obv. Head of the Persian king r., wearing a jagged crown. Rev. Falcon in flight, viewed from below, head r.; in r. field YHD (Yeh[u]d) in Paleo-Hebrew (Gitler, Lorber, Fontanille, *The Yehud Coinage*, 50; 63–65; 112–113; 168–169; 227–229; 377–386; 446). Scale 4:1

These lighter coins are interpreted as quarter-obols struck on the Attic standard.¹⁰ Evidence suggests this metrological transition occurred during the administration of Yehizqiyah *ha-pehah*, the last governor of the province of Yehud.¹¹ Numismatic data confirms that the shift in weight standards took place while he served as the issuing authority for the Yehud provincial silver coinage (Fig. 2).¹²

¹⁰ Haim Gitler, Catharine Lorber, »A New Chronology for the Yehizkiyah Coins of Judah«, *Schweizerische Numismatische Rundschau* 87 (2008) 61–82. Cf. Gitler, Lorber, Fontanille, *The Yehud Coinage*, 41–73 (with a discussion on the weight standards: a statistical overview written in collaboration with David L. Weisburd, 56–58).

¹¹ On the title *phw'* see Oded Lipschits, David S. Vanderhooft, *The Yehud Stamp Impression: A Corpus of Inscribed Impressions from the Persian and Hellenistic Periods in Judah* (Winona Lake, IN: Eisenbrauns 2011), 77–80.

¹² Gitler, Lorber, »A New Chronology«: 68.



Fig. 2: Yehud Type 24, Attic standard quarter obol, c. 320(?)–312 BCE. Obv. Facing head on oval shield with dotted outline. Rev. Owl standing r., head facing; in r. field YHZQYH (Yehizqiyah); in l. field, reading upward, HPHH (*ha-pehah*, the governor) in Paleo-Hebrew. (Gitler, Lorber, Fontanille, *The Yehud Coinage*, 51; 67–68; 115–117; 240–243; 397–406; 448). Scale 4:1

While precise dating remains elusive, this transition clearly aligns with the historical pivot from the twilight of the Persian hegemony (pre-332 BCE) to the consolidation of Macedonian control. The process potentially extended into the reign of Ptolemy I (c. 320 BCE), a period marked by Yehizqiyah's issuance of the extensive Type 24 series.¹³ This series is notable for its exceptional production volume, utilizing a minimum of 32 obverse and 46 reverse dies, signaling a peak in the province's minting activity during this transitional era.¹⁴

The change in the weight of the main coin in circulation from 0.24 g to 0.19 g represents a denomination ratio of 4:5. Thus, four coins of half *gerah* from earlier issues weighed the same as five coins of a quarter obol from the subsequent period. This phenomenon must have affected the portion of monetary circulation governed by *al marco* standards where value was determined not by the weight of individual pieces, but by a fixed number of coins exchanged for one sheqel. And here a striking regularity emerges. The weight of one-fifth of a sheqel in the later weight standard coinage system corresponds exactly to one-sixth of the coin weight in the earlier system. One-sixth as a reference unit is not unknown in Biblical tradition:

And you shall drink water by measure, one-sixth of a hin; at fixed times you shall drink (Ezek 4:11)

¹³ Yehud Type 24 represents the next major phase of the Judaeen coinage. The coins again bear the name of their issuing authority, Yehizqiyah *ha-pehah* (the governor), indicating that Yehizqiyah had been formally (re)confirmed in his position as governor of Judah, and also advertising (for the first time) that his authority was delegated by a higher political power. Cf. Gitler, Lorber, Fontanille, *The Yehud Coinage*, 115 and see note 71.

¹⁴ Gitler, Lorber, Fontanille, *The Yehud Coinage*, 397–406, Connection Tables 37–46; 448, Type 24. This coin type represents the second largest series of Yehud coinage, see François de Callatay, »The Yehud Coinage: An Essay on Quantification«: 315 in Gitler, Lorber, Fontanille, *The Yehud Coinage*.

This is the offering that you shall make: one-sixth of an ephah from each homer of wheat, and one-sixth of an ephah from each homer of barley (Ezek 45:13)

And you shall provide a grain offering with it morning by morning regularly, one-sixth of an ephah and one-third of a hin of oil to moisten the choice flour, as a grain offering to the LORD; this is the ordinance for all time. (Ezek 46:14)

Admittedly, the cited passages pertain to liquids and grain rather than to coinage; nevertheless, they constitute compelling evidence for the conclusion that the unit of account originally employed in calculating dues corresponded to one-sixth. Consequently, the underlying system appears to have been based not on a decimal structure, but rather on a duodecimal one.

This allows for a new explanation of the origin of the biblical references to the Holy Sheqel, consisting of 20 *gerahs*, and the references to increasing sacrifices by one-fifth. Before the currency change, only the normal conversion rate of 24 *gerahs* for one sheqel was in use, and the temple regulations assumed an increase in offerings by one-sixth, i.e. adding four *gerahs* to one sheqel, or eight coins of the smaller half *gerah* denomination. This tradition has been preserved in passages from the Book of Ezekiel. Under this new weight standard, eight coins with a face value of a quarter-obol weighed significantly less than their predecessors. This situation prompted the temple elite to change the conversion rate from one-sixth to one-fifth, which gave the same weight of silver. As a result, it was necessary to clarify how to obtain one-fifth of a sheqel, since previously a sheqel consisting of 24 *gerahs* had been in use. At this point, it was necessary to introduce the decimal system, and thus an artificial measure. It can therefore be assumed that the process of changing the text proceeded as follows: the original one-sixth (שישית) was replaced by one-fifth (חמישית) and an explanation was added: »the sheqel is twenty *gerahs*«. It is also likely that this editorial change meant the addition of the name »Holy Sheqel« itself, as previously it was based on ordinary coins. It was only after this change was made that it became necessary to explain which monetary system was meant.

4 Conclusions

If the explanation proposed above is correct, then a set of conclusions can be drawn concerning both the process of editing the Pentateuch and everyday life in the province of Yehud.

1. The creation of a virtual conversion rate of 1 sheqel = 20 *gerahs* served to facilitate the conversion of one-fifth of the amount due. However, as Raz Kletter

has already argued, this was a virtual system for two reasons. Firstly, sheqels until the end of the Persian period were traditionally divided into 24 parts, and secondly, Attic standard obols, hemiobols, and quarter obols appeared in circulation instead of Judahite or Persic standard *gerahs*.

2. The editorial change was of a mixed nature: »sixth« (שישית) was changed to »fifth« (חמישית), and an explanation »a sheqel of twenty *gerahs*« (עשרים גרה השקל), or »in the sanctuary sheqel: twenty *gerahs* shall make a sheqel« (בשקל הקדש עשרים) (גרה יהיה השקל) was added. This means that, just as four half-gerah coins were originally added to one shekel under the one-sixth conversion rate, so too were five quarter-obol coins added to one virtual holy shekel under the one-fifth conversion rate.

3. However, the changes did not include an update of the monetary system and the replacement of the sheqel and *gerah* of the Judahite or Persic standard with new coins – obols, hemiobols and quarter obols on the Attic standard. This may indicate two possible circumstances. Either the authors and intended audience of these regulations were very attached to the old nomenclature, or – which seems more likely – the provisions in the Torah were already considered authoritative, and therefore such a far-reaching change as updating the regulations to the new weight standard currency would have been a violation of the Torah's reputation. A natural process of adaptation to the contemporary currency is observed in the LXX, where the »Holy Sheqel« was replaced by the *didrachma* (Exod 30:13: τὸ δίδραχμον τὸ ἅγιον; Lev 27:25: εἴκοσιν ὀβολοὶ ἔσται τὸ δίδραχμον).

4. Editorial changes consisting of amendments and additions explaining the value of the Holy Sheqel took place shortly after the change in weight standard used for the production of the Yehud coins. It has been proposed that this transition to an Attic weight standard occurred under Yehizqiyah *ha-pehah* between 320(?) and 312 BCE.¹⁵ Therefore, we assume it is highly probable that the priests of the temple in Jerusalem made the changes shortly after that date.

5. We also have a strong *terminus ante quem* for the existence of biblical regulations describing the rules of sacrifices in the Temple. While a broad consensus among biblical scholars identifies the Persian period as the primary era of Torah composition, the field has historically lacked definitive chronological anchors for absolute dating. The present analysis establishes such an anchor, providing a concrete evidentiary basis for this timeline.

6. It is evident that the editors' motivations were related to a real decrease in income. Therefore, we can be certain that before the editorial changes, the Biblical regulations on increasing sacrifices by one-sixth were applied in practice. Only the

15 Gitler, Lorber, Fontanille, *The Yehud Coinage*, 448, Type 24.

practical dimension, i.e. the decrease in the amount of silver brought to the Temple, was a necessary motivation for interfering with the text.

Abstract: The article endeavours to elucidate the origins of the Biblical references concerning the so-called »Holy Sheqel« of 20 *gerahs*. It is posited that during the governance of Yehizqiyah, there was a reduction in the weight of the most commonly circulated coins. We propose the hypothesis that at that time, the older system of increasing temple dues by one-sixth was supplanted by a system that augmented these dues by one-fifth. This process allows for absolute dating, around 320 BCE, for a series of biblical passages, providing a rare instance of a robust chronological anchor for the texts of the Hebrew Bible.

Keywords: Holy Sheqel; Coins; Yehizqiyah; Pentateuch edition; absolute dating.

Zusammenfassung: Der Artikel versucht, die Ursprünge der biblischen Verweise auf den sogenannten »Heiligen Schekel« von 20 Gerahs zu klären. Es wird angenommen, dass während der Herrschaft von Yehizqiyah das Gewicht der am häufigsten im Umlauf befindlichen Münzen verringert wurde. Wir schlagen die Hypothese vor, dass zu dieser Zeit das ältere System, die Tempelsteuer um ein Sechstel zu erhöhen, durch ein System ersetzt wurde, das diese Abgaben um ein Fünftel erhöhte. Dies ermöglicht eine absolute Datierung, etwa um 320 v. Chr., für eine Reihe biblischer Passagen und bietet einen seltenen Fall eines chronologischen Ankers für die Texte der Hebräischen Bibel.

Schlagwörter: Heilige Schekel, Münzen, Yehizqiyah, Pentateuch Editionen, Datierung.

Résumé: Cet article tente d'élucider les origines des références bibliques concernant le »sicle du sanctuaire« de 20 *gerahs*. Il soutient l'hypothèse que, sous le règne de Yehizqiyah, le poids des pièces de monnaie les plus couramment en circulation a été réduit. À cette époque, l'ancien système consistant à augmenter les contributions au temple d'un sixième a été supplanté par un système qui augmentait ces contributions d'un cinquième. Ce changement de système permet de donner une datation absolue, vers 320 avant l'ère courante, pour une série de passages bibliques, offrant ainsi un rare exemple de repère chronologique solide pour les textes de la Bible hébraïque.

Mots-clés: sicle du sanctuaire; pièces de monnaie; Yehizqiyah; édition du Pentateuque; datation absolue.